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AIR TRANSPORTATION

(REG. U. S. PAT. OFF.)

Per R
AUG 7 1946

JULY 1946

Vol. 9 • No. 1



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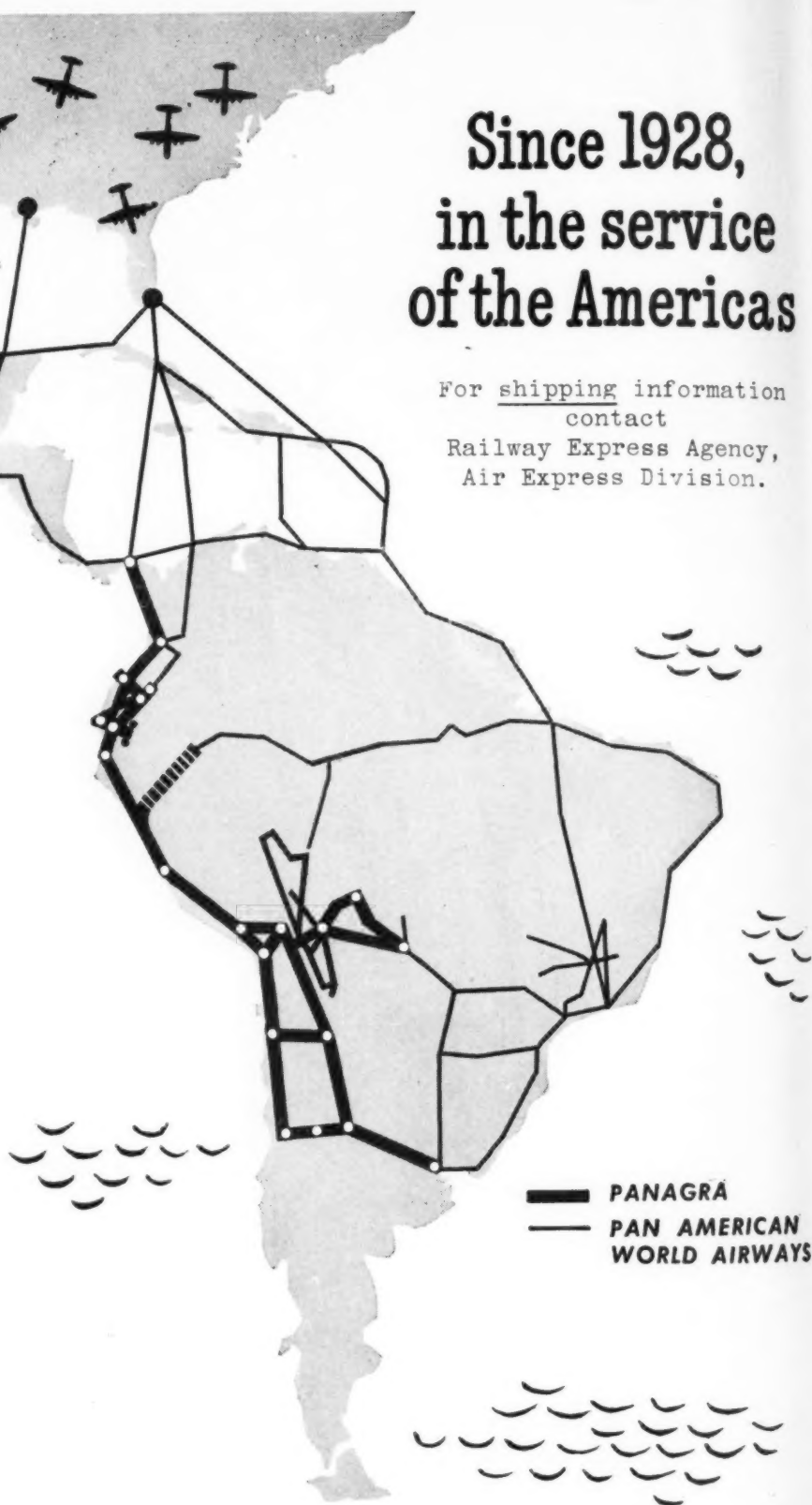
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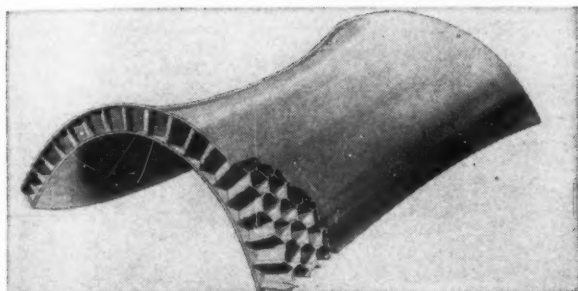
TO AIRLINES THAT BUY MARTIN

Pictured on this page are just a few of the many new Martin developments that will boost performance and production of Martin airliners. Scores of other developments, individually minor but collectively important, will cut costs and increase efficiency of the new Martin airliners.

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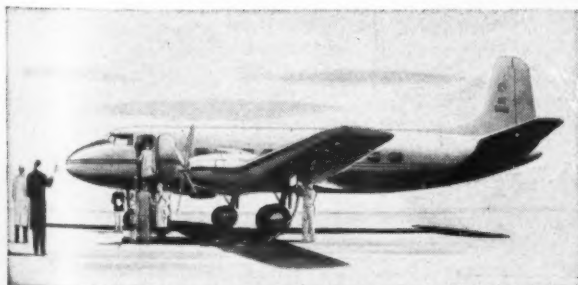
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In Front! Forward entrance door, first developed by Martin, is a typical example of how Martin pioneering keeps Martin aircraft well ahead of the field at all times.

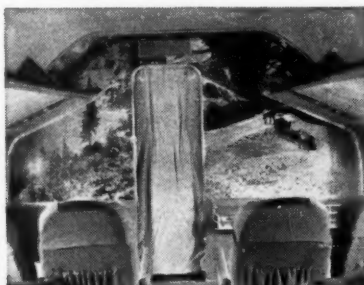
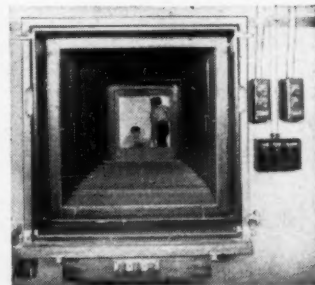


Photo-Finish! Smart interior of Martin airliners may be finished off with photo-murals, thanks to Martin Multi-Mulsion—a photographic emulsion developed by Martin.



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A SOUND and color motion picture, designed to acquaint students with the effects of postwar aviation on commerce and international relations, has been processed at the Telefilm Studios of Hollywood by the Air-Age Education Research. Produced in cooperation with the Air Transport Command, the film is intended for non-profit distribution to senior and junior high schools.

Globe Aircraft has announced the certification of its new all-metal 125 horsepower *Swift*, which has a maximum speed at sea level of 150 miles per hour, a cruise speed of 140 miles per hour, a landing speed of 48 miles per hour, and a cruising range of 512 miles on 28 gallons of gasoline.

Twice-weekly service from New York to Brussels, Prague and Vienna has been inaugurated by Pan American World Airways.

Chlorophyll air freshener devices are being installed in Western Air Lines fleet of postwar planes, in order to eliminate food and tobacco odors from the airliner cabins.

Major General Claire L. Chennault, leader of China's Flying Tigers during the war, is returning to China to organize an airline for hauling food to stricken areas there.

The aeronautical division of Minneapolis-Honeywell Regulator Company is currently engaged in research and development work on 31 engineering products in the aviation field, with major emphasis being placed on further development of the company's automatic flight control systems.

Eastern Air Lines has made agreements with the American Express Company and Thomas Cook and Sons providing for certain of their offices in a number of major cities to issue Eastern Air Lines tickets instead of their own exchange orders.

The three Scandinavian airlines (Danish Airlines, Norwegian Airlines, and Swedish Intercontinental Airlines) have acquired a new ticket office in Rockefeller Center, at 6 West 51 Street, New York City.

Miss E. Roddick Roberts, formerly passenger relations manager for TACA Airways in New York, has resigned to open her own specialized travel service, called All Continents Travel, Inc., with offices at 148 East 48 Street, New York.

Seven 21-passenger, Douglas aircraft, purchased from surplus war goods by Canadair, Inc., in behalf of the Swedish Airlines, will be sent to Europe to augment the line's continental service, following a program of overhaul and conversion work.

VOL. 9
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AIR TRANSPORTATION

[REG. U. S. PAT. OFF.]

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1946

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THE COVER—The day is not far off when giant amphibians will be a familiar sight in the air and on the waters of all travel and shipping routes. This picture is reproduced through the courtesy of the Timken Roller Bearing Company.

JOHN F. BUDD, Editor and Publisher

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Publishers of CUSTOM HOUSE GUIDE and
AMERICAN IMPORT & EXPORT BULLETIN

Publication Office:
TEN BRIDGE ST., NEW YORK 4, N. Y.
Phone: WHitehall 4-2898

Business Manager: B. L. WEST
Managing Editor: RICHARD MALKIN
Advertising Mgr.: HENRY W. FISCHER

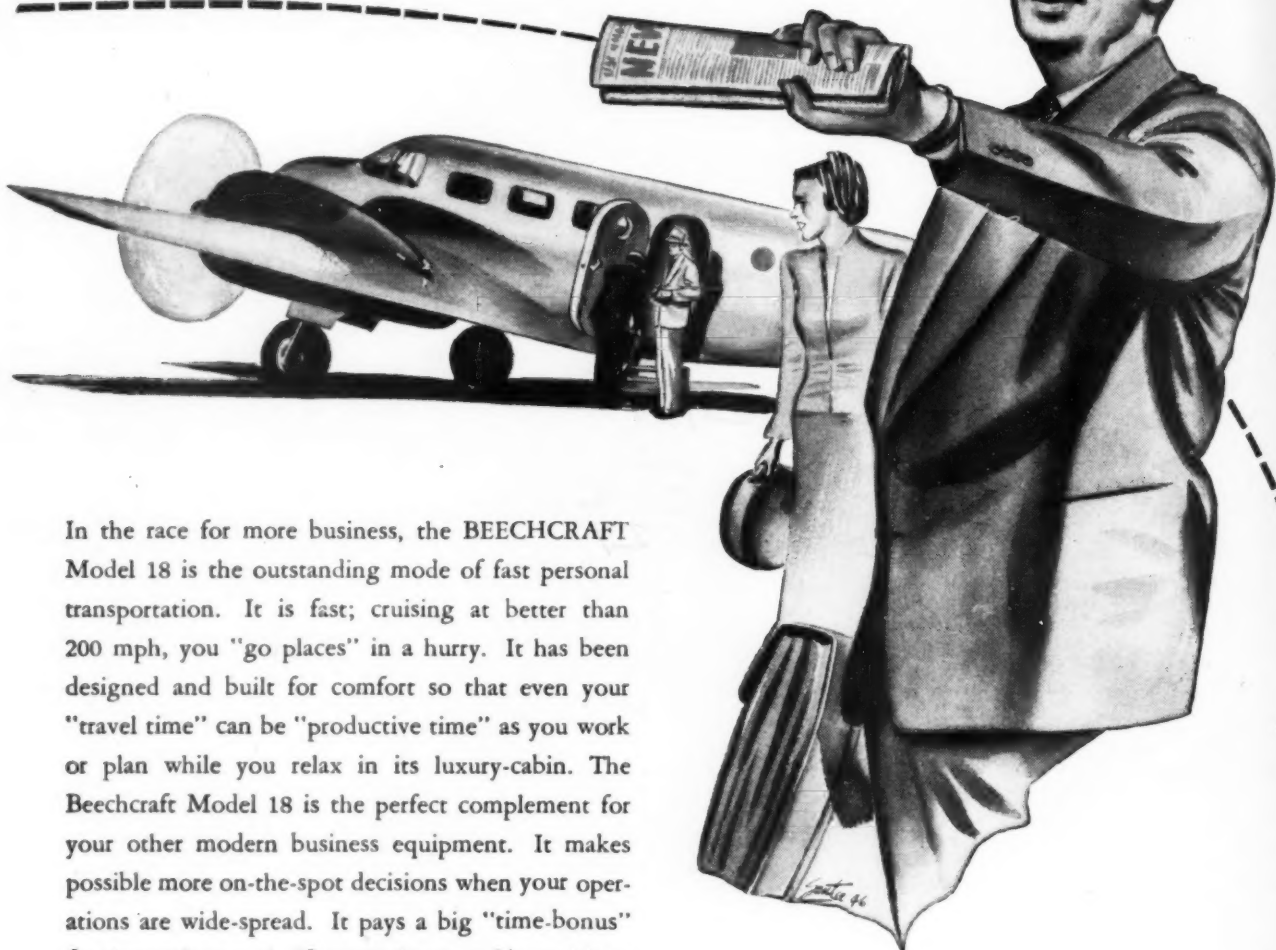
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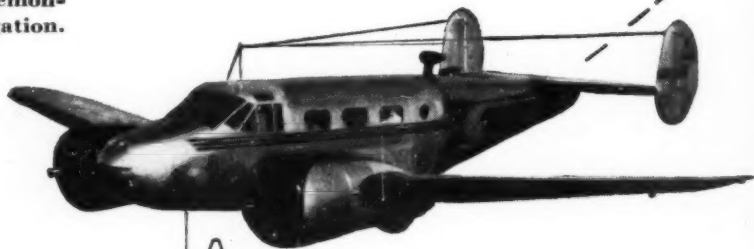
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Surveying the Export Field for AMERICAN AIRCRAFT

By HARVEY C. TAFE . . . Washington Representative in charge of Export Sales
Consolidated Vultee Aircraft Corporation

IT looks as if foreign business should boom for American aircraft—the best engineered and best quality planes in the world. But the situation isn't that simple. If you analyze the world, nation by nation, you will see why the American airplane manufacturer is going to have to fight for every dollar's worth of foreign business he gets.

Some of his heaviest competition will be with Great Britain. In eager pursuit of foreign trade, Britain is placing special air ambassadors in all prospective purchasing countries. The British long ago learned the advantages of cultivating foreign markets in the early stages of their development.

The United States enters the post-war race for foreign trade with the knowledge that Great Britain is still the champion. The projected United States-to-Britain loan is intended to avert a trade war between us, and equalize competitive conditions. But, for at least a whole year, British products can be rushed into export, under the shelter of Empire protection. These exports are intended to make friends even while they make Britain money—friends whose trade will be retained in the future.

Reported statistics show that the aircraft manufacturers in England may now have as many as 800,000 workers employed, which is almost half the total personnel that they employed during the war. Almost all their effort is being directed toward large production for export.

Although the British, like the French, Swedes, and few other nations, are purchasing some new American equipment, this apparently reflects no permanent policy. At the moment, they have an immediate need of modern airliners to fulfill their contracts to operate their international routes. Without modern equipment they could not compete with American airlines, or develop their trade routes. Furthermore, their purchases of modern United States equipment will guide their engineers in designing new production of their own, which later is to compete in world markets.



Harvey C. Tafe

In the months immediately following the war, the United States has seemed to have at least one sales advantage of its own—the ability to furnish airplanes to foreign countries quickly, airplanes that were war-surplus. Even the British airlines have been using United States equipment temporarily. Many other foreign lines, such as KLM, Swedish Airlines, Iceland Airways, and Belgian Airlines, have also been purchasing our war-surplus air transports.

If the Americans can follow up such surplus sales with offers of quick deliveries of new airplanes—which will be much cheaper to operate, and will have higher speeds—some of these airline operators may buy the new American equipment ultimately. And some of them may keep on buying it; to change types of airline equipment is a tremendous expense, because of resultant changes in flight training, ground handling and parts supply.

Hence selling or leasing our surplus transport airplanes to air transport companies in friendly nations may help establish American aircraft permanently in the operations of certain foreign airlines.

Our Government's Surplus Aircraft

Sales Center at Miami, Florida, is an interesting exhibit. The Army Air Forces and the Foreign Liquidation Commission of the War Assets Board have taken a large building (250,000 square feet) at the Miami Air Base as a showroom for aircraft and supplies.*

The first purpose of this Sales Center has been to sell South American countries the surplus aircraft equipment of the Army and Navy. Later, other countries will be invited to purchase. Airplanes, parts, radios, instruments, tools, ground handling equipment and even flight clothing are being offered. Merchandising methods equal to anything offered by any private business are being utilized. These sales of surplus planes are not necessarily competitive with the market for our new aircraft—they may help to expand and stimulate it.

But a real challenge exists in this Government operation. Manufacturers who visualize the horizons it opens to them need to follow up these public sales of surplus aircraft with aggressive merchandising. Our manufacturers may find that resulting orders will not immediately show a profit. But this early missionary work will give them many future advantages over competitors.

It is not in Europe that our most promising foreign market for American aircraft lies. Britain will naturally want only British-built planes on her global airlines.

Holland and Sweden had their own flourishing aircraft industries before the war, and want to have them again. France, like Britain, is trying hard to strengthen her economy, and intends to build her own aircraft hereafter, just as she did before her collapse. Germany and Italy are out of the picture. Russia remains the great unknown, and the territories where she has assumed control seem no longer promising markets for our products.

In the Pacific and Far East we can likewise see no extensive markets for our aircraft. Australia, for instance, has developed an infant aircraft indus-

* See November, 1945 issue of AIR TRANSPORTATION.

try of her own, and protects it with a high tariff. China—at least for a while—will offer only a limited demand for military planes and perhaps war-surplus transports. Siam, Thailand, French Indo-China, will offer only small markets at best. In India, where plane transportation is a vital need, British affluence is dominant, and we should find it hard indeed to compete with the British in their own backyard.

We come inevitably to one conclusion: the really attractive markets abroad for our aircraft lie largely right in our own hemisphere — in Latin America and Canada. We may add to this other limited areas like the Middle East, the Philippines, and the Union of South Africa. But most of the foreign business is near at home.

Of all the regions where airplanes are urgently needed, South America is the one ready market where the American manufacturer can be certain of a real volume of export sales.

Most of the important South American countries enjoyed unexampled prosperity during the war, and piled up large dollar trade balances by selling numerous supply articles to the United States Government. These dollars are now available for purchases of imports from the States. Further, a preference for our aircraft seems assured.

Lend-Lease Planes

The United States Government has seen fit, under the Good Neighbor Policy, to lend-lease large numbers of our airplanes to South America, and has sent air missions into almost every South American country to train native pilots. South American students have also been brought to the United States for air and technical training.

Such a policy is being continued since the war ended. The result is that South American countries have learned to appreciate the quality products of American aircraft manufacturers—products which they were usually unable to purchase prior to World War II.

They have been able to compare our aircraft with some of the cheaper airplanes they once secured from Germany, France, England and Italy. With the possible exception of Argentina, they are ready to purchase American airplanes, even on the cash terms demanded by most American manufacturers.

Brazil is outstanding as a prosperous nation that holds over \$3,000,000,000 in favorable balances accumulated during the war. Practically all of her commercial and private airplanes now

in service are 10 years old. With an area larger than the United States, Brazil has vast unexplored territories inaccessible by the country's comparatively undeveloped railroad and highway systems. Wealthy land-owners with their large *fazendas* are eager for airplanes with which they can commute to their scattered holdings. The mining industry and the rubber industry also need aircraft, to reach isolated locations. Above all, the country's airlines need it.

A recent market research report estimates that there should be a Brazilian market in the first postwar year for about 300 two-place airplanes, 250 four-place airplanes, and about 75 planes of various types for airline equipment. At the present time the Brazilian airlines are operating 75 transports of various makes which are between five and 10 years old.

In Brazil there are 6,540 licensed pilots, and it is estimated that 1,500 additional civilian pilots will be trained during 1946. Furthermore, there are

240 Government-sponsored Aero Clubs in Brazil. All this is a gauge of the nation's great interest in aeronautics.

In Argentina the topography of the country is excellent for air operations. While there are 150 registered airports, you can "set down" an airplane almost anywhere in the open country. But we have had political differences with the Argentine government, and we have not as yet been able to sell airplanes to Argentine purchasers.

Market surveys indicate that there is an immediate requirement here for from 600 to 800 airplanes. But North American manufacturers still stand outside. Great Britain meanwhile is developing her contacts in Argentina, has recently sold four Short Sunderland Flying Boats to one of the large airlines, and has opened up offices in Buenos Aires.

Uruguay, although a comparatively small country, has shown great interest in the development of aviation, due to its closeness to Buenos Aires and



OUR SOUTHERN NEIGHBORS—South Americans have compared United States aircraft with cheaper ones from England, France, Germany, and Italy, and they have learned to give top billing to those manufactured in the United States. The Chilean natives shown above seem to read a message in the sky.



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ANGLO-AMERICAN COMPETITION—The author stresses the point that some of the competition of the American airplane manufacturer will be Great Britain. "In eager pursuit of foreign trade," he says, "Britain is placing special air ambassadors in all prospective purchasing countries." Above is the de Havilland Dove, Britain's newest light transport. It carries from eight to 11 passengers.

the extremely heavy air traffic between that city and Montevideo.

With a topography similar to Argentina's, Uruguay is an easy country to fly around in. There are 21 designated landing fields in Uruguay, and many landing strips on the numerous ranches. There are 880 registered private pilots and 21 registered Aero Clubs.

Uruguay has an immediate need for about 100 private airplanes of the two-place and four-place class. There are two domestic airlines in operation; their present equipment consists of old German seaplanes and twin-engine English transports. The market analysis indicates that they have immediate need for about 10 single-engine aircraft for airline feeder work and for perhaps

10 of the twin-engine type, and also several large flying boats for the traffic between Buenos Aires and Montevideo.

Chile, with large dollar balances from the export of nitrates, also offers good prospects. The Government has aided aviation by developing Aero Clubs around the large cities, and now requires by law that persons trading in aircraft must have a registered engineer in their employ qualified to inspect and certify that airplanes are in good shape.

Chile is handicapped in areas available for airports, in that the country, is strung along the coast, with the high Andes along the back. But a budget of 300,000,000 pesos for airport development is being met through gasoline taxes, and an extensive airport development is under way, with an ultimate expenditure of 1,500,000,000 pesos.

In the coming year the country could probably utilize 200 of the two-place aircraft and 125 of the four-place. British Latin-America Airlines (BLAIR) will use British airplanes, and Great Britain already has taken Miles Magisters to Chile for use by the Aero Clubs. But the National Airline (LAN) now operates 10 United States transports,



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and is in the market for 25 new airplanes, ranging from single-engine to four-engine. Panagra, which also operates in Chile, will, of course, purchase United States planes through Pan-American. Cruzeiro do Sul, a Brazilian airline operating to Chile, will also use United States airplanes. Cia sud America de Vapores, a Chilean steamship line, is just starting operations and is also in the market for United States airliners.

Colombia, with heavy dollar balances derived from war-time sales of tin, does not use the airplane as extensively as some other countries, partly because of extremely mountainous terrain. Most airports are above 7,000 feet above sea level. But airlines here are using converted war-surplus airplanes to carry passengers and freight into the mining region. They also haul machinery and laborers from the ports and return loads of processed ore to the coast. While Colombia will probably not purchase over a hundred airplanes of all types in the next year, the market is developing.

Peru has long carried freight by air, and her commerce will be enormously developed by the new type of airplanes now available. Like Chile, Peru is surrounded by mountains on one side and ocean on the other, and has comparatively few places for landing fields. The private plane market in Peru will be limited. But there is a need for commercial-type airplanes for flying into the hinterlands where rubber development and mining is conducted.

Faucett Airlines (the main native airline) has been using Stinson *Reliants* and tri-motored Stinson As for a number of years in carrying freight and passengers from Lima to inland towns. During the war, a number of Catalina PBVs were also used in Peru in work of the United States Rubber Development Corporation. Airport development programs are being started, and several new feeder lines have commenced operations between Lima and coastal cities. All are endeavoring to obtain United States equipment.

Bolivian Needs

Bolivia, comparatively small and mountainous, will need airplanes for freight hauling, due to the lack of railroads and highways, but will have comparatively little development of private flying.

Venezuela, while comparatively rich through its oil production, has its wealth concentrated in a way that limits the market for airplanes. Government control over the development of the airlines and civilian flying likewise limits the market in Venezuela for personal aircraft. The airlines will probably purchase their airplanes in the United States through their holding companies.

Mexico offers us an important aircraft market. Though her industry is nationalized in many ways, aircraft manufacturing has not been developed to handle the demand. Mexico City is the focal point for business. Even those people having large mining or oil prop-

erties, or large ranches in remote areas, center their business in Mexico City.

Many new airlines have started up. The main Mexican airlines—Compania Mexicana de Aviacion, Pan-American, American and Braniff—purchase United States airplanes. Smaller airlines use surplus or converted United States airplanes. Steadily increased business makes a demand for more equipment. The present number of airline airplanes of all types being used—approximately 50—will probably be tripled within two years. Freight-carrying airplanes are rapidly being put to use; this freight business can prosper because of the inadequate railroad and highway development.

While personal flying will not be extensive, and will be confined to the wealthy and to members of Aero Clubs, interest is mounting in Mexico City. Vera Cruz, Acapulco, Mazatlan and Monterey. An immediate market for 150 new personal airplanes is apparent. Some wealthy businessmen want small two-engine equipment for visiting their holdings; in the mountainous terrain, cross-country flying is safer with two engines.

Central American countries like Panama, Costa Rica, Guatemala, Honduras, and San Salvador, will purchase few airplanes individually, but the over-all market is worth seeking. A number of our former Air Force pilots are developing airports and service facilities in these countries which were previously neglected. These former Air Force boys will naturally act as ambassadors for United States aircraft.

Canada offers us a market really worth having. While Canada had an aircraft manufacturing industry of her own during the war, the number of airplanes sold there domestically would hardly warrant continuing large aircraft factories in that country. Many Canadian pilots flew American airplanes in the war and liked them. As these men return to private life, many of them are starting local airfields and are eager to purchase United States equipment. The one drawback is the Canadian tariff on our manufacturers, which makes American airplanes highly expensive for Canadian citizens. Plans are under way in the hope of developing a reciprocal trade agreement on airplanes and parts, to enable purchasers in Canada to buy airplanes at approximately the same price as in the United States.

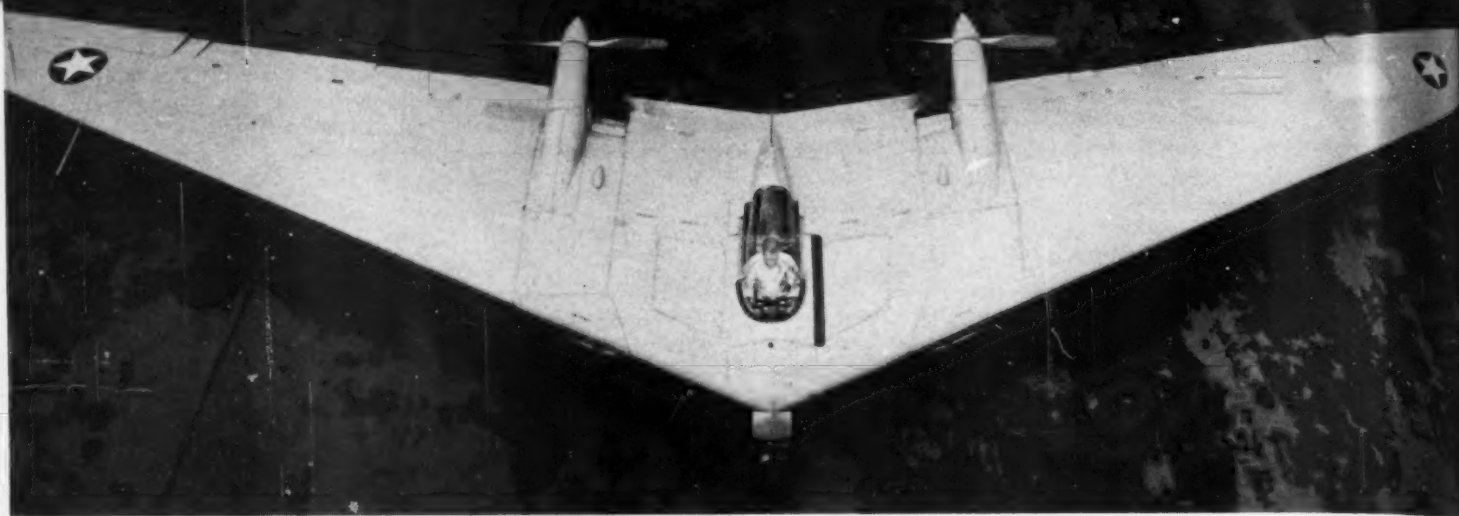
On beyond this hemisphere are two other spots where American aircraft should find ready purchasers. One place is the Middle East; the other, South Africa.

The Union of South Africa, popu-

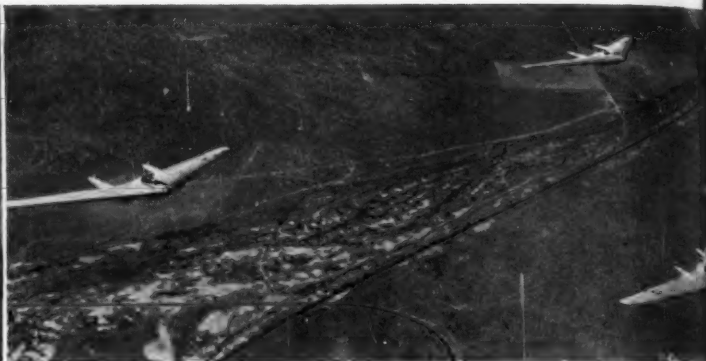
(Concluded on Page 48)



FLYING IN COMFORT—Spacious interior of Consolidated Vultee's forthcoming Model 37. The 204-passenger craft has two decks, two lounges, a galley, and ample space for bulky cargo.



Another Northrop Flying Wing



WRAPPED IN SECRECY until last month, the four-engined Northrop Flying Wing bowed in after two years of construction as a giant aircraft with an overload gross weight of more than 104 tons. It spans 172 feet, with an area of 4,000 square feet.

Originally designed as a bombardment-type airplane of exceptionally long range and heavy load capacity, the Flying Wing may evolve as a cargo-

plane. It is the first of 15 such planes which are to be produced by Northrop Aircraft under Army contracts. The cost of the first of these is \$13,000,000.

The Northrop Flying Wing (XB-35) is built with a new aluminum alloy said to be far stronger than previous materials of similar nature. Useful load is reported at 73,000 pounds, and, according to its builders, this load could reach as high as 120,000 pounds.

The picture of the four-motored Flying Wing (lower left) is shown as it was trundled out to Northrop Field, Hawthorne, California, for outdoor engine and propeller tests. The other photographs show twin-engined N9M Flying Wings, 60-foot flying scale models of the giant XB-35. Only two engines are installed in the N9M's because four motors were impractical for so small a plane.

Terminal Service For Air Cargo Carriers Is Launched in Baltimore

Moving to meet the demands of Baltimore's increasing air freight business, a new organization designed to provide terminal service and facilities for air carriers in much the same manner as railroads, steamships, and trucks are served, began operations at the Baltimore Municipal Airport last month.

The new firm, organized along the lines of Cargair, Inc., of Los Angeles, is offering its services to all airlines serving Baltimore. The service is aimed at overcoming what has been classed as one of the greatest obstacles to the growth of the air freight business—the lack of proper facilities and trained personnel to handle cargoes between the point of origin to the airport of departure, and to receive such freight at the destination airport and de-

liver it to the receiver. It was explained that while some larger airlines may have sufficient freight moving between a few of the major cities of the country to justify the employment of their own equipment and personnel on a permanent basis at such points, the great majority of the air freight carriers do not have enough business to warrant individual establishments at such points of call.

Known as Rukert Air and Steamship Agency, the new company is a division of the Rukert Terminal Corporation. Charles R. Butz, vice president and manager of the new organization, was released from the Army last February with the rank of lieutenant colonel.

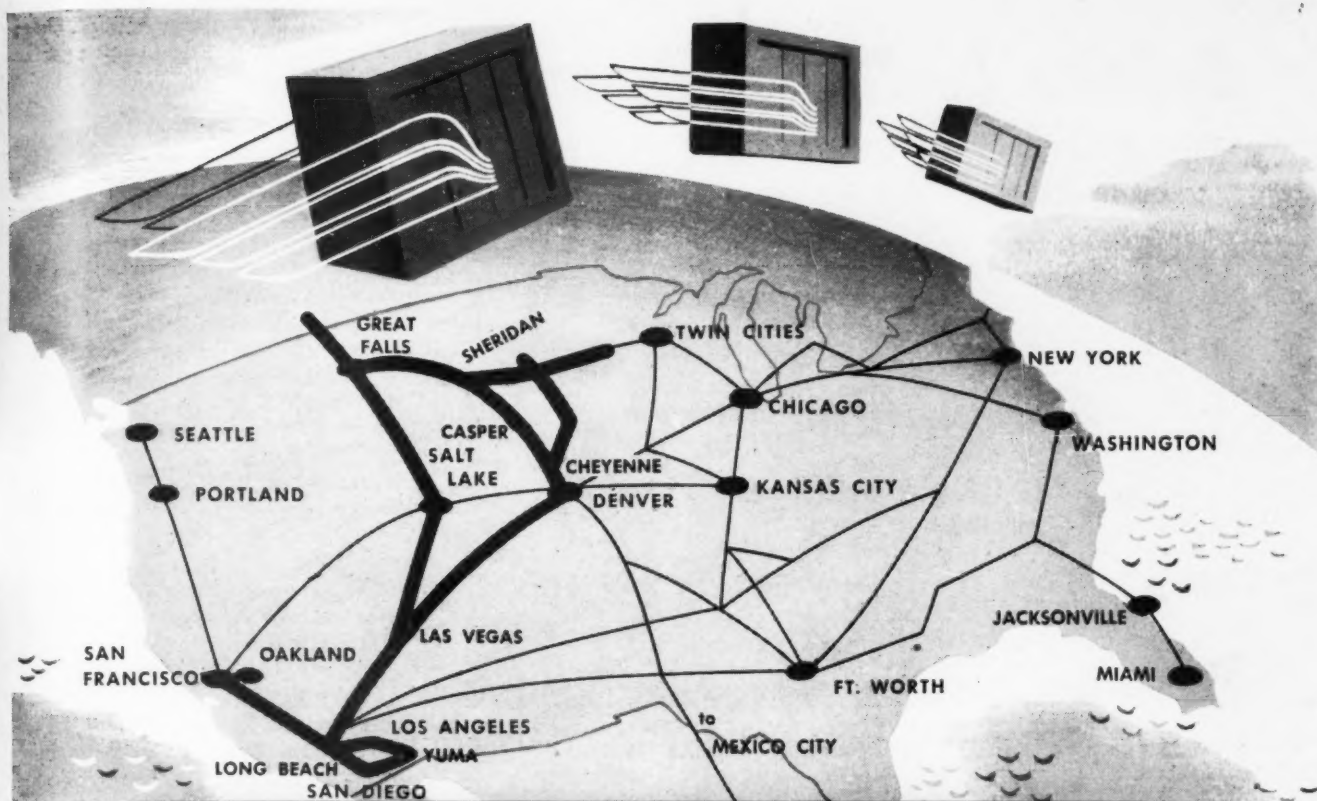
A partial survey of air freight firms, both certificated and noncertificated, made by the Aviation Bureau of Baltimore's Association of Commerce, indicated keen interest by the carriers in the new service. It was pointed out that a great portion of today's air freight is moving along newly organized lines formed by ex-military pilots.

"These men are thoroughly experienced in the handling of aircraft," Butz said, "but many of them lack practical working knowledge of freight handling on the ground. This new service should be a natural for them."

A building has been rented at the airport and is being used for the collection, breakdown, and distribution of the air freight. Equipment in use at the terminal include fork lift trucks for hoisting freight to plane doors, tractors, trailers, and delivery trucks. A certified weigher and portable scales are available.

Services offered embrace general air cargo handling, plane loading and unloading, storage of air freight when required, collection and remittance of COD and prepaid shipments, packaging for air shipment, and customs service for foreign importing and exporting by air.

Butz stated that Rukert has contacted Cargair, and both are "working out a plan for handling each other's business in Baltimore and Los Angeles."



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Bolivian Beef Dons Wings



BEEF GOES BY AIR—A C-47 of Transportes Militares de Bolivia taking on a load of meat for flight over the peaks of the Andes.

By **CHARLES S. MACAULAY**
Senior Economic Analyst
United States Embassy
La Paz, Bolivia

IN the food problems confronting many Latin American areas, the physical isolation of different districts within a given country has in the past often constituted an obstacle of most formidable proportions. A district that is capable of rich production of foodstuffs may lie relatively near (on the map) to a region that needs larger and better supplies of food, but natural barriers may tend to inhibit the movement of the products. Striking examples of this condition exist in the Andean countries of South America, where the giant ranges of mountains ordinarily slow up trade, or definitely shut off certain aspects of it.

Can air transport in this new age, operate to counteract or banish a portion of these difficulties? A certain new enterprise in Bolivia, of which the essential phases will be outlined in this article, evidently warrants the answer "Yes."

Probably one of the most significant experiments now being carried on in Bolivia looking toward making the country self-sufficient in food production is that being conducted by the Bolivian Development Corporation—in purchasing and slaughtering cattle at Reyes in the low-lying Department of the Beni, east of the Andes, and transporting the meat by air to the capital

city, La Paz, on the lofty plateau. Without planes, that meat just could not reach its destination—but *with* planes it can get there in less than an hour and a half!

As agricultural reporting officer of the United States Embassy at La Paz, the writer made the trip to Reyes in one of the planes engaged by the Bolivian Development Corporation, for the purpose of viewing the progress that is being made and of evaluating the future possibilities of this project.

Over the Cordillera

The plane, a C-47, originally designed for paratrooper use, took off from the airport located on the Altiplano about five miles from La Paz (at an altitude of about 13,430 feet) at 9:05 a.m. It was snowing in the Cordillera, so the direct route through a narrow pass could not be taken. The plane climbed to over 19,000 feet across Lake Titicaca and turned northeast at a pass beyond Mount Illampu (21,518 feet). All that could be seen of Illampu was the tremendous Andean peaks piercing through the heavy clouds. A high altitude had to be maintained so as not to crash against the other peaks of the Cordillera while flying through a heavy rain. Finally the clouds broke sufficiently to enable one to identify the town of Rurrenabaque on the Beni River, and from this point it was easy to set a course to Reyes, about 35 kilometers distant.

The heavily forested areas around

Rurrenabaque gradually changed to vast areas of pampa. At 10:18 the plane landed at the airport which had been cut in the scrub timber. The elapsed time was one hour and 13 minutes. The airport at Reyes is at an altitude of approximately 1,400 feet. The pilot, Major Alarcon, announced that in his opinion the weather was closing in more and more and that he would not attempt to return to La Paz the same day.

At one side of the airport a thatched roof covering had been erected as a temporary slaughterhouse. A small corral from which led a chute to the side of the improvised slaughterhouse held sufficient cattle for the shipment of the return load of meat. Inasmuch as the weather had been so uncertain, no cattle had been slaughtered prior to our arrival, and because we were not returning that afternoon, the butchers were sent home and no slaughtering was done that day.

This afforded us an opportunity to look over the ground which had been staked out for a new air strip which would be longer and would permit the handling of heavier pay loads. It also permitted us to learn of the plans for the new slaughterhouse and refrigerated rooms which are to be erected alongside the new air strip.

That night there was a heavy rain which thoroughly soaked the airport and made an early take-off dangerous. It was not until 10:30 the next morning that the pilot approved the condition of the air strip—which was the signal for the slaughtering to commence.

Because of the large number of passengers for the return load, only three steers were killed, in order that the aggregate weight of the passengers and meat should not exceed 1,500 kilograms. The cattle were selected, killed, and dressed. The quarters of beef were scrubbed and made ready for the trip.

The plane was dragged by the tractor to a point where it headed in a direction which afforded the best strip down the field for the take-off. Ant hills in the field, which had been removed but which had not grown over and were relatively soft, formed dangerous spots which might bog down or turn over the plane and therefore had to be avoided if possible. Canvases were fastened to the floor and half way up the side walls of the rear portion of the plane, and on these canvases the quarters of beef were placed and tightly tied down. The nets of hearts and the like were also placed on the floor of the plane and likewise made fast. The passengers had to wend their way through the piles of meat to the front of the plane where 10 paratrooper seats had been set up.

Because of the shortness of the field and the possible dangers of soft spots,

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AMERICAN AIRLINES

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JULY 1946—PAGE 15

the pilot set the brakes and revved the engines to seemingly top speed. When the brakes were released the plane shot forward and easily cleared the soft spots and the scrub growth at the far end of the field.

Shirtsleeves to Overcoats

The weather was still very heavy, and we were again obliged to take the dog leg around Mount Illampu and across Lake Titicaca and the relatively flat Altiplano to the airport serving La Paz. At Reyes, before the take-off, we sat around in our shirt sleeves perspiring freely. It was not long after we were in the air that sweaters, and then coats, and then overcoats were in order. The plane landed at 2:55, making an elapsed time of one hour and 20 minutes. At the airport there was a truck waiting to hustle the meat to the refrigerated room of one of the companies in the Bolivian capital, where it would be further cooled and marketed the next morning.

Pending the construction of proper facilities at Reyes, the Bolivian Development Corporation has decided to carry on the slaughtering and transporting by air in order not only to help supply some of the present meat requirements of La Paz but also to obtain experience which will be helpful when the project is a full-fledged operation.

The new airfield at Reyes is being constructed on higher ground which will permit a longer take-off. It will consist of a sod base and will be maintained in good condition at all times. This should permit the maximum load of meat from Reyes. On one side of the air strip will be located the slaughterhouse and the refrigerated rooms as well as the quarters of the manager and personnel. The entire airport district is expected to consist of approximately 2,000 hectares. The rest of the area will be divided into grazing areas and fields for cultivating corn and other supplemental feeds. It is planned to have on hand, for fattening and conditioning, from 2,000 to 3,000 head of cattle at all times.

The cattle when purchased will be dipped in order to kill all ticks, lice, and tropical parasites. They will then be placed in tick-free grazing areas for fattening and conditioning. It is now planned to cultivate corn and other supplemental feeds for the fattening of the cattle and to provide the cattle with salt—a thing that is practically unheard of in this area at the present time. It is believed that the quality of the cattle can be substantially improved by controlled care prior to slaughter. The Development Corporation also plans to encourage better breeding and care of the cattle on the farms from which the

The Author

A native Chicagoan, Charles S. Macaulay is presently serving as senior economic analyst at the United States Embassy, La Paz, Bolivia. Before entering Government service, he worked with banking concerns and conducted a private practice of law. He has also been a purchaser of cinchona bark in Guatemala, with FEA. This article is published here through the courtesy of *Foreign Commerce Weekly*.

cattle will be purchased.

Rather than delay the completion of the refrigerating rooms until new refrigerating equipment becomes available, the Corporation has purchased second-hand refrigerating equipment in the country. It was hoped, when this article was written, that the new facilities would be in operation within 90 days, but, with the necessity of bringing in most of the material and labor by air, it probably would be at least six months before completion of the facilities.

Return Hauls

One of the major problems in any form of transportation is that of having a back haul in order to reduce the costs of the payload. To provide this back haul, the Development Corporation decided to set itself up in the merchandising business at Reyes. In this way, it was possible to bring goods into the region for sale and take out meat, thus providing a two-way payload operation.

Because of the inaccessibility of the Department of the Beni due to the mountain ranges separating it from the Altiplano, that Department (particularly in the area adjacent to the Beni River) has been served for the most part with merchandise brought in from Brazil. Likewise, the produce of this area for the most part was sold to Brazil instead of contributing to the food needs of Bolivia's Altiplano. The project for bringing meat from this region to La Paz by plane has, therefore, related values which may prove to be equal to or greater than the value of bringing meat to the Altiplano. The operation should better "tie in" this area to Bolivia not only economically but also politically and should, in addition, help to raise the standards of living of the people, both in the Altiplano and in the Beni.

Here (one seems justified in feeling) is a striking example of the way in which the ability of air transport to surmount physiographic obstacles, with extraordinary ease, can contribute toward the solution of food problems and trade problems which otherwise would present well-nigh "impossible" difficulties.

SILK FOR MILADY'S LEGS



One of six bales of raw silk, the first received here since Pearl Harbor, shown as they are loaded into a TWA Constellation at Los Angeles. The 686-pound shipment, transported by boat from the Orient to the West Coast, was flown to New York for processing. It was the first large shipment of silk ever to take to the air. Lending a hand at the left is James Clarke of the Los Angeles customs brokerage firm of Williams, Clarke and Company. The man in the center is unidentified.

PCA to Inaugurate Air Cargo Services July 15

Richard E. Fell, vice president of Pennsylvania-Central Airlines, has announced the entrance of the company into the air freight field, indicating that the new service will begin on July 15.

PCA has filed a cargo tariff with the Civil Aeronautics Board, and is readying a fleet of four-engined Douglas Skymasters for use as air freighters. The airline's freight service will cover all 50 cities on its system.

The tariff calls for a 26½ cents per ton-mile rate. Fifty-mile blocks will be used in computing rates. Fell explained that this would benefit short-haul shippers. He pointed out that the 50-mile block is of benefit to shippers over distances of 200 to 500 miles, for the reason that the rate increases for distance is substantially reduced. Previously, 100-mile blocks had been employed to compute all air transportation costs.

Arrangements have been made for ground pickup from shipper to airport, and from airport to consignee. This is designed to cut ground handling time.

WAL to Yellowstone

Service to Yellowstone Park, suspended in 1941 as a war measure, has been resumed by Western Air Lines on the route between Los Angeles, and Great Falls, Montana. The airline has also opened service to Jackson, Wyoming, gateway to Grand Teton National Park.

AIR--X--PRESS

PERISHABLES SAVED BY AIR EXPRESS DURING THE RAILROAD STRIKE

A railroad train at Green River shuddered to a halt—restrained by the nation's paralyzing railroad strike. In the train were several refrigerator express cars loaded to capacity with tomatoes. Unless they were kept moving another way, some 17,500 pounds of tomatoes were sure to become unfit for human consumption.

"COORDINATION" A BY- WORD FOR RAILWAY EXPRESS

Telegrams and long distance calls sparked the wires. "The Air Express Division of Railway Express will handle all air shipments for all the airlines, in addition to those scheduled airlines served under contract." Under the Office of Defense Transportation order, it meant that all air shipments flown by the scheduled, the non-scheduled airlines, the ATC and Naval Air Transport Service—even the Civil Air Patrol was made available), were to be funneled through the Express Agency.

TOMATOES SAVED BY NON-SCHEDULED AIRPLANE

The entire load of tomatoes was removed from the refrigerated car and loaded into trucks for haulage to Rock Springs Airport. A C-54 waiting there for the cargo flew it to Baer Field, Ft. Wayne, Ind.

Another non-scheduled plane, its propellers "revving" up, receives orders from the Omaha, Nebr. Control tower. "Hold your ship—A load of perishables is on the way to the Airport by Railway Express motor vehicles." Another 4,700 pounds are added to the plane's cargo. An additional cargo plane was dispatched from Chicago to pick up 13,000 pounds of perishables to be flown back there.

NOTHING NEW UNDER THE SUN

Someone once said—"There is nothing new under the sun." This may be applied to air express. Many old-time pilots who flew "by the seat of their pants" say that air express began with the first shipment of a bolt of silk flown to Dayton, Ohio, on the lap of a passenger and Pilot Phil Parmelee back in 1910. However, it wasn't until 1927 when commercial air express began operations—yet air express actually dates back to thousands of years ago in Egypt. Homing pigeons flew 400 miles from an inland orchard to the Caliph of Cairo with tiny silk bags attached to their legs, filled with luscious cherries.

AIR EXPRESS IS BIG BUSINESS

In the early days of air express, publicity-minded shippers used this service for promotional and advertising stunts—nor was air express overlooked in emergencies when human life depended upon a certain serum or instrument getting there in time. Emergencies still happen today of course and air express is still used to advantage—but air express is big business today, with the ordinary shipper, small or big, turning to air express to restock his depleted shelves, receiving an up-to-the-minute style number, or just plain dependent upon speedy transportation to meet competition. In 1928, the first full year of air express operations, 17,006 shipments were carried. In May of 1946, New York City alone air express shipments amounted to 95,059!

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NEW HORIZON FOR THE HELICOPTER



By MALCOLM G. DAVIS, Vice President, Gilbert Associates, Inc.

So you want to see helicopters in commercial operation! Good enough—but there are economics to be considered. Here's a clear evaluation of certain significant factors which will give you much food for thought.

WHEN some weeks ago, I was asked to address the Economic Session of the American Helicopter Society forum on the general subject of the economic characteristics of helicopter operation, I was inclined to lift an eyebrow and say, at least to myself, that the contraption has no economic significance at the present time. On sober second thought, however, I realized that none of the major technical developments of the past—as for example the steam engine and its various adaptations in power supply and transportation, the electric generator and the methods of transmitting and distributing power, the fixed wing aircraft, the electron valve and many others too numerous to mention—had actual or realized economic significance at the time of conception and early development.

Thus, the economic power of each major technological advance is necessarily potential, or latent, at the time of inception and becomes significant only as the new process or machine impinges upon the needs and desires of society and its value and importance can be tested in the laboratory of practical experience. If the new development is able to fill a need, theretofore unfilled or even unknown, or to serve society more effectively than the then existing methods, it has economic significance.

At this point, however, I would like to draw a rather fine line of distinction.

This distinction is that a new process, product or machine may have economic significance, in the sense of potential abilities to supply an unrecognized need, or to do better a job already being done by some prior development, and yet may never realize more than a small fraction of its potential value to society. This lack of ability to fulfill theoretical potentialities may arise from inherent complexities of design and operation, or from unavoidable costliness that results in materially reducing economic worth as measured by the normal market standards which equate value in terms of cost. Other factors, such as early obsolescence, resulting from newer and better developments coming in quick succession, may also cause a widening in the difference between potential and realized economic significance.

With these general definitions in mind, of what I mean by economic significance, I will present an evaluation of certain significant factors which bear directly upon the potential and possible realizable significance of the helicopter in the economics of transportation. More specifically, I will assess its economic significance as a prospective contributor to the future full development of air transportation.

In presenting my thoughts on this subject I shall draw to some extent upon the experience gained as consultant for the Yellow Cab Company of Cleveland, Inc., and the Yellow Cab

Company of Philadelphia.* The work done by my organization in these two assignments has been primarily in connection with drawing up general specifications and analyzing prospective markets for the operation of helicopters, on a somewhat limited scale, in air transportation. In this connection I wish to give full credit to our associate, J. P. Perry, Chief Engineer of the G. & A. Aircraft Company, who was retained by us in an advisory capacity as consultant on all technical phases of the two programs.

More or less similar operations have been proposed by both companies and applications for certificates have been heard by the Civil Aeronautics Board in the so-called Great Lakes Area and Middle Atlantic Area cases, respectively.

All of us who use air transportation for the purpose of reducing time otherwise lost in going from some place where we didn't want to be to some other place for which we care even less, or who use air transportation because it is cleaner and generally—and I use the adverb advisedly—more comfortable, are all too well aware of the major disadvantages of this transportation medium.

The most significant of these disadvantages and the one that cannot readily be overcome by existing methods and equipment, and most certainly not

* See November, 1945 issue of AIR TRANSPORTATION.

with the advent of larger and faster planes, is the necessity for long and frequently uncomfortable journeys from major airports to city centers. These local travel requirements are inherent in the use of fixed wing aircraft and become progressively more significant as the length of trip is shortened—thus, time wasted in local traveling is unimportant in connection with a trip from New York to San Francisco, but is quite significant when the trip is from New York to Philadelphia.*

The other disadvantages, or more properly I should say annoyances, that presently exist in air transportation are not inherent to this particular mode of travel and, I hope, will soon be overcome. I refer to the time-consuming annoyances of present ticketing methods, the mysterious abracadabra that has to be gone through in order finally to get into the shining silver monster of the air, and the long and annoying delays in retrieving baggage at points of destination. The fact that the airlines engage the prettiest and most polite aggregation of ticket-sellers and attendants, of any of the several transportation media, does not reduce the annoyance; it merely dulls the pain. However, as I say, these annoyances are not necessarily inherent to air transportation and I don't believe that even the most enthusiastic "helicopter" would claim that these problems can be solved simply by the use of direct lift aircraft.

However, the major disadvantages of air transportation, which are related primarily to the physical necessities of locating commercial airports anywhere from five to 15 miles from the commercial centers of the country's major cities, can be overcome by direct lift aircraft. By reason of its relatively high speed, in relation to ground transportation, and its ability to land on and to take off from restricted areas, the helicopter has both a time and place utility in the economic equation of air transport.

In other words, one of the important future functions of the helicopter can be found in supplementing trunk line operations by providing the necessary additional increment of speed and comfort which a sizable segment of the traveling public will expect and for which it is willing to pay a reasonable premium. We may visualize this type of service as carrying passengers between the trunk line airports of the major metropolitan districts and centrally located landing areas which will be readily accessible to the important



The Author

Vice president of Gilbert Associates, Inc., engineers and consultants with offices in New York, Reading, and Washington, MALCOLM G. DAVIS has, for the greater part of the past two decades, been connected with the fields of public utility economics and finance, preparing market studies with particular reference to transportation and public utility services.

A Massachusetts Institute of Technology graduate, Davis' earlier connections include the Southern Sierras Power Company, California Railroad Commission, Philadelphia Company, and Atlantic Utility Service Corporation. During 1933 to 1935 he was a special lecturer on public utility economics at the University of Pittsburgh.

financial, commercial and business activities of the particular cities. This type of service will represent a replacement, in whole or in part, of existing modes of ground transportation.

Obviously, the location of suitable landing areas for this type of service is a matter of prime importance. However, I do not believe that a detail discussion of this problem is appropriate to a general treatment of the question. I might state though, that in my opinion suitable rooftop landing areas will ultimately provide the answer to the terminal problem of city-center service.

In addition to such shuttle services the operation of helicopters may well be extended to provide direct delivery of passengers from trunk line airports to the major suburban and industrial areas which surround and are an integral part of each major metropolitan center. Studies made by my organization have indicated that a major portion of the air passenger traffic generated by a metropolitan area originates in, or destined for, those suburban areas that rank in the upper portion of the economic range of the particular community, or the local areas in which the major concentrations of industrial activity are situated.

A well planned operation for a metropolitan area can readily coordinate these two types of routes so as

to provide optimum service to the community, within the limitations of the cost and value of the service. I have previously stated that such services are supplemental to trunk line air transportation and hence the potential markets can reasonably be expected to expand in proportion to the growth of the air travel habits of the nation. While I am not of the opinion that there exists no limit upon the future development of air transportation, I do hold that it can be expected to expand very materially during the period of the next several years, even in the face of progressively tighter competition from the surface carriers. This means an expanding market for the supplemental services that can be supplied by helicopters.

Another important potential market for air transportation service by direct lift aircraft is in the furnishing of short haul, or feeder line services to the major industrial and commercial communities that may lie within 75 to 100 miles of each important metropolitan center. Such communities generally range in population from 10,000 to 150,000 persons, and, in some instances, may presently be receiving limited trunk line air service. Furthermore, it is to be expected that trunk line services to such communities, as secondary stops on major trunk line routes, will be expanded in the near future. However, the present or prospective existence of trunk line service does not militate against the development of effective markets for "direct delivery" air transport service. It is this latter ability that makes the helicopter particularly attractive as a medium for furnishing short haul service with its consequent elimination of lost time and motion between airports and business centers.

In the selection of routes for this type of service care must be exercised to include only those communities that show evidence of being able to generate a suitable volume of traffic. This, of course, is fairly obvious. Another important factor is to select routes which will interconnect those areas that have definite communities of interest and to limit distances between scheduled stops to an average of not less than 25 miles. More frequent stops will result in destroying one of the major values of the service—speed—by increasing overall travel time between termini by 10 to 15 minutes for each stop.

At present attainable helicopter speeds it will be found, over routes extending from 75 to 100 miles between termini, and with three or four intermediate stops, that there will result only minor savings in travel time as compared with that presently offered by express rail service. This means

*The air distance between New York and San Francisco is 2,568 miles; between New York and Philadelphia, 83 miles.



FIRST IN FORTY-SIX—When the Army started handing out serial numbers in 1946, a G & A helicopter was the first aircraft to be designated. The XR-9B (above) is also the first light-weight helicopter to be accepted by the Army. G & A Aircraft, Willow Grove, Pennsylvania, is a subsidiary of the Firestone Tire and Rubber Company

that in the selection of helicopter service routes direct paralleling of main line railways may be undesirable from the standpoint of developing full passenger potentials, particularly under present circumstances with helicopter cruising speeds limited to 80 to 90 miles per hour and resulting flight schedule speeds cut to approximately 75 miles per hour.

From the standpoint of public convenience and the resulting ability to develop the requisite traffic potentials it is my opinion that the helicopter offers the only technically practical means of furnishing short-haul air transportation service. Whether in the present state of development of the helicopter such service can be priced at a level which will induce an adequate volume of traffic is a problem that must be seriously considered before embarking upon any program to render a public service. In this latter respect, our studies have indicated that initial operations, between suitably selected points showing high traffic densities, can be expected to break even on a fare structure which will return an average of eight to nine cents per passenger-mile. Obviously, such a fare is not competitive with the fares of other modes of transportation. On the other hand, it has been our considered opinion that there exists a sufficient volume of premium travel between important industrial and commercial communities, tributary to a major metropolitan district, to provide the requisite traffic volume to support initial operations at the relatively high fares indicated.

The two types of services just described—shuttle and short-haul—are operations which would run on fixed schedules and be placed in the common carrier category under the provisions of the Civil Aeronautics Act. In general, I believe that the scheduled operation is the only one that can be financially successful over the long-term period, although there do exist attractive possibilities in the operation of charter services in an area in which there is extensive travel by corporation executives to nearby cities and where popular vacation areas may lie within 50 to 100 miles of the metropolitan center. Beyond the 100-mile range it is probable that the fixed wing aircraft can provide charter service on a basis somewhat more attractive than that which can presently be offered by the helicopter.

In view of the foregoing we may also list charter service operations as another field in which the helicopter may supplement the developing pattern of air transportation. An ideal operation would probably combine scheduled services, both shuttle and short-haul, with charter service made available through the use of the one or two spare operating units that would necessarily be required in connection with a four- or five-route scheduled operation. Such a program would materially increase the utilization factor of the spare operating unit or units and improve the overall economy of the situation.

In this discussion I have not touched upon the many important commercial and industrial uses to which the heli-

copter may be applied. This has been done purposely, as I have planned to limit the scope of my article to consideration of the helicopter as an effective addition in the field of common carrier air transportation.

Summarizing the results of my studies relating to the potential uses of the helicopter it is my opinion that in the field of commercial transportation direct lift aircraft may be expected to find an extensive market in (1) supplementing trunk line air transport operations by providing airport shuttle services in the major metropolitan areas, (2) short-haul transportation between groups of cities having extensive communities of interest and located within maximum route distances of approximately 100 miles, and (3) for various types of passenger charter service.

It is probable that on the short-haul routes and even in shuttle operations, mail and express will be carried. The prospective uses of the helicopter, outside of the transportation field, are numerous and include various types of patrol work, cargo-carrying, exploration, surveying and mapping operations, as well as many special uses where the direct lift characteristic and high degree of controllability at all speeds are of especial value to the prospective user.

If the helicopter is as adaptable to the special requirements of shuttle and short-haul passenger and goods transportation and can be applied effectively to so many special types of operation, it is reasonable to ask why there are not hundreds of helicopters currently in use. The answer is, of course, that no units have yet been produced that can meet the operational and economic requirements of transport service; insofar as concerns the numerous special uses there are several types of units that have reached the stage in their development where they can meet the necessary requirements of speed, flight, stability, and lifting capacity. However, the actual commercial production of suitable units is only now starting and I understand that it will be some months before equipment is in operation on any extended scale.

Based upon our studies, I can state that a helicopter suitable for economically feasible operation in passenger transportation—either shuttle or short-haul service—is not now available, although it is reasonable to assume that its development from presently existing basic designs is only a matter of a relatively short time.

Equipment that has been announced as available within the immediate future is deficient of payload capacity,

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is too slow for optimum results and is priced materially above the level where even a unit with materially greater payload capacity could be operated successfully in commercial service.

Those who are engaged in the design and manufacture of helicopters undoubtedly recognize that until they develop a unit which can meet at least the minimum requirements for commercial transportation service, they cannot expect venture capital to enter the field of helicopter operation. To do so would mean to embark upon operations that would be marked for financial failure from the very start. Sound economics runs contrary to such practice. By this I do not imply that the ultimate in helicopter design must be produced before commercial uses can be expected to develop; I do say, however, that flight characteristics and price must be such as to offer a reasonable opportunity for successful operations at a premium fare, which fare will not be so high as to discourage all but the occasional thrill-seeker.

More specifically I am certain that a three- to five-passenger unit, with a practical scheduled cruising speed of approximately 75 miles per hour (gross cruising speed of 85 miles per hour with an assumed 10 miles per hour headwind) and an initial cost materially in excess of \$30,000 to \$40,000 cannot be operated successfully in commercial scheduled service, except at fare levels which would be prohibitive to all but a very limited segment of the traveling public. It may be that the promise of better things to come will lead to a few forward-looking prospective operators to start service with obviously uneconomical units. However, these operations can be expected to continue only for a limited time if the designers and manufacturers fail to produce units to meet the economic requirements of common carrier service.

It is but a short step from my statement concerning the deficiencies of presently available equipment to establishing reasonable minimum requirements for a commercial unit that could be successful in a favorable market. Perhaps I am in the position of the fool walking in while the angels stand around with fear stricken faces, but, be that as it may, here are what I believe to be a minimum basic requirements for a successful commercial transport unit.

Payload Capacity:

Passengers 6 to 10, plus
Baggage, Express & Mail 400 to 600 lbs.

Operating Characteristics:

Cruising Speed 100 to 115 m.p.h.
Operating Range (fully loaded)
150 miles

First Cost.....\$30,000 to \$50,000

While the above represent minimum requirements I believe that optimum results, in the present markets, would be obtained with 10 to 15 passenger units operating on shuttle service and 12- to 20-place units on short-haul routes. Furthermore, the shuttle service units could properly be designed for somewhat lower cruising speeds than the short-haul units. At the start of operations, however, the six- to 10-passenger unit, used interchangeably on the two types of route, would undoubtedly be adequate.

It is my considered opinion that if the minimum basic requirements cannot be met then one might just as well forget about helicopters at every airport.

Obviously if operating economics can be improved, maintenance costs reduced, and cruising speeds raised, the first cost of a commercially feasible unit can move upward from the levels just named. However, the quid pro quo for higher cost must be increased efficiency expressed in terms of speed and running costs.

Based upon equipment specifications, somewhat lower than those just cited we have made detailed calculations of hypothetical costs and revenues covering operations over four shuttle and five short-haul routes that are proposed to be operated by the two clients previously mentioned. These nine routes involve a total distance of 539.4 miles and would be served by nine units, one spare unit, and certain additional spare assemblies. A total of 58 scheduled round trip flights would be made per day; operations are assumed to be on a daylight contact basis; and the total time that equipment would be airborne, giving effect to weather and breakdown cancellations, was estimated at a total of 16,420 hours per year, or approximately 1,800 hours per operating unit per year. Total completed flight distance was calculated at slightly more than 1,000,000 miles per year, or 120,000 miles per operating unit per year. Based upon the foregoing conditions the unit operating costs, expressed in

cents per scheduled flight mile, were found to be substantially as shown in the table on this page.

I would call the reader's attention to the fact that this computation of costs shows non-flight expenses in the amount of only 10.5 cents per flight-mile, or approximately 20 percent of total costs. This is materially lower than is experienced in trunk line operations and reflects the elimination of many special services considered necessary by trunk line operators, but not needed in local service. The general and administrative component of non-flight costs is also quite low in relation to trunk line experience, which condition can be attributed, in part at least, to the fact that in both operations overall administrative and all accounting and other general management functions would be furnished by the existing organizations on the basis of an allocation of charges highly favorable to the air transportation operation. A wholly independent operation would necessarily have to meet these costs in full with the probability that they would be increased, on a unit basis, by 100 to 150 per cent.

Flying operation expenses are developed on the assumption that a co-pilot would not be required on short-haul service; the addition of co-pilots would increase costs by eight cents to 10 cents per flight-mile. Flight equipment maintenance and depreciation expense both reflect the estimated cost of a production unit and its major components. This cost was set at \$32,000 and any change in actually realized first cost would change these two major expense items in almost direct proportion.

The difference in unit costs between the two operations is due primarily to the fact that Operation B is approximately two-and-one-half times as large as Operation A, as measured by total estimated annual flight-miles, but would require only twice as much equipment. In other words, Operation B had a somewhat better utilization factor than Operation A. Certain other minor dif-

**ESTIMATED UNIT OPERATING COSTS PER
FLIGHT MILE FOR HYPOTHETICAL HELICOPTER
AIR TRANSPORTATION OPERATIONS**

Based Upon Use of Nine Six-Passenger Units Plus Spare

Expense Classification	Operating Costs Per Flight Mile		Total
	Operation A	Operation B	
Flying Operations	21.6¢	19.5¢	20.2¢
Flight Equipmt. Maint. (Dir. & Ind.)	11.6	8.8	9.6
Ground and Pass. Service	5.3	4.7	4.9
General and Administrative	5.8	4.6	5.1
Depreciation:			
Flight Equipment	14.4	13.9	14.0
Other	0.7	0.4	0.5
Total	59.4¢	51.9¢	51.3¢

ferences in basic costs, wage rates, etc., account for other variations in the estimated results.

A quick glance at the unit costs that have just been discussed, considered in relation to the fact that the proposed flight equipment would consist of six passenger units, indicates that an average fare of close to 10 cents per passenger-mile is necessary merely in order to break even. The recommended fares for both operations called for a ticketing charge of 25 cents plus mileage rates of eight cents and 12 cents per passenger-mile, respectively, on the short-haul and shuttle routes. At these fares, and at a reasonable assumption as to passenger load factors, the two operations would just about break even with the assistance of some revenue from excess baggage, mail, and express. These miscellaneous revenues were estimated to amount to less than five percent of total revenues.

It is apparent from these cost estimates that real financial success cannot be expected from common carrier operations by helicopters until the following

three advances in product design and production are made:

- (a) Greater passenger capacity.
- (b) Higher speeds.
- (c) Lower first cost.

The reader may well ask why we did not establish our cost estimates on the basis of the optimum unit of 10- to 15-passenger capacity, and, further, assume more favorable speed conditions in order to give greater effective utilization. My answer is that we attempted to stay as close to reality as was possible in the preparation of an hypothetical study.

If the helicopter industry wants to tap what I firmly believe to be a great potential market for the products of its brains, drawing boards and factories—that is, the commercial transportation field—it is up to the industry to come up with the answers to the problems that I have rather sketchily outlined. This division of the aviation industry has made tremendous strides during the war years, and with the extensive background of aerodynamic and mechanical knowledge and experience that

has accumulated during the approximately half-century of aircraft development, should now be in a position to go rapidly the rest of the way to full commercial maturity.

That broad markets will soon be available for commercially suitable helicopters is implicit in the recommendation made by public counsel, in the Great Lakes Area case, that the Civil Aeronautics Board certificate the Yellow Cab Company of Cleveland to operate routes requested in the Cleveland area. To my knowledge, this marks the first favorable recommendation made upon any of several applications for helicopter operations that have so far been heard by the CAB.

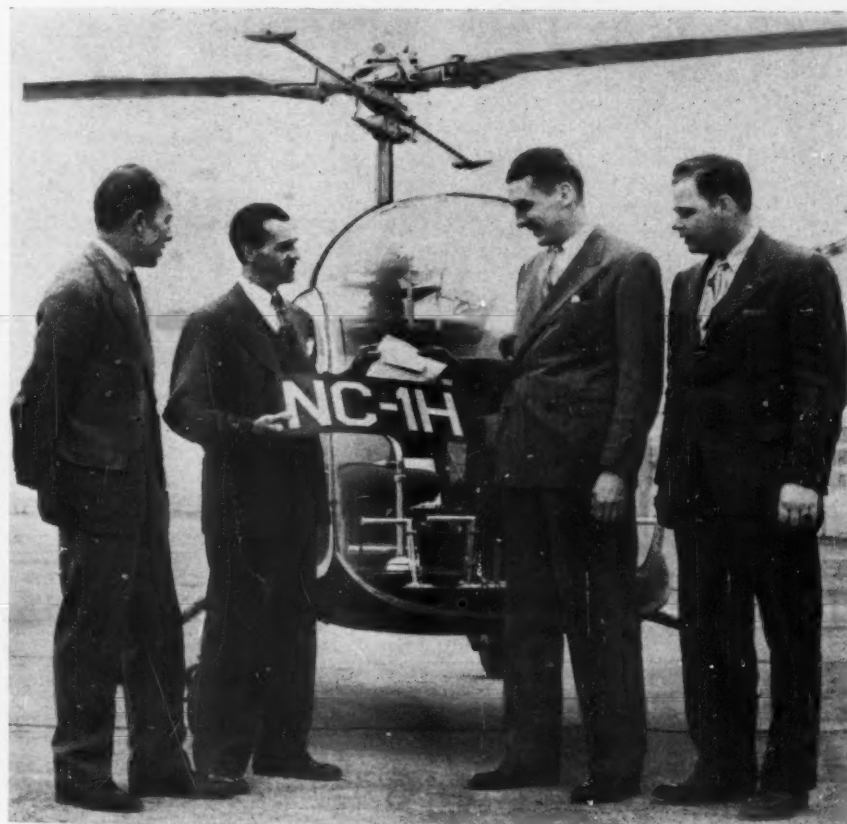
No small part of the prospective success of this application is due to the fact that the applicant was able to prove (1) the existence of an established administrative staff of proven experience, (2) its ability to finance the proposed operations, and that (3) an objective approach was made to the question of suitable equipment. By an objective approach I mean that recognition was taken of the fact that no suitable equipment was available at the time of the application; on the other hand we proved through competent and disinterested technical testimony that such equipment could be expected to become available within a reasonably short period after the development of a suitable market. This approach was in contrast to that made by various other applicants in which overemphasis was placed upon the assumed availability of a particular unit which, at the time, had not even reached the prototype stage.

Boeing Sales Force To Sell Model 417 Abroad

Plans have been announced by Fred B. Collins, sales manager of the Boeing Aircraft Company, for global coverage by personnel of his department for possible markets for the new Model 417. The entire facilities of the engineering and production departments at the company's Wichita plant will be devoted to this plane. The Model 417 is a twin-engine transport seating 20 to 24 passengers, and is readily convertible to all-cargo or passenger-cargo operations.

Fly-Away Service

Similar to car haul-away and drive-away systems set up by automobile plants, Skyway Transport Service, Inc., of Detroit, has announced a new fly-away factory airplane set-up. Present fly-away activity is reported to be at the rate of 150 aircraft per month. STS was organized by Seymour Karp and A. Alan Montrose, who have gathered around them former military flying instructors and Air Transport Command pilots.



NC-1H IS THE NUMBER—David G. Forman, manager of Bell Aircraft Corporation's Helicopter Division (second from right), shown accepting the first commercial license ever to be granted by the Civil Aeronautics Administration for a helicopter from R. H. Guerard, CAA inspector. A CAA airworthiness certificate was issued for Bell's new two-place helicopter known as the Model 47, which can be seen in the picture. Left to right are Arthur M. Young, designer of the Bell helicopter; Guerard; Forman; and Floyd W. Carlson, Bell's chief helicopter test pilot, who helped to conduct the CAA flight tests on the Model 47 in cooperation with Raymond B. Maloy, chief of CAA's Flight Engineering Division. The company has in production an initial quantity of 500 Model 47s, most of which are expected to be ready for sale by the end of the year. Speeds of over 100 miles per hour were attained during flight tests: Operating speed is 80 miles per hour and range 250 miles.

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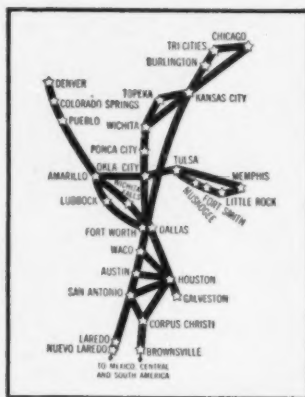
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For a NATIONAL AVIATION WEEK

There is hardly an industry in this country which, through the medium of an officially set-aside annual "national week", does not take advantage of this vehicle to underline that industry's importance to the domestic economy as well as its contributions to what we proudly call the American Way.

Yet that major industry—aviation—is without one. There is no such thing as a National Aviation Week!

Looking back over the formative years of aviation, both commercial and military, I could find no actual step in the direction of an all-over celebration designed to point up the industry as a whole: one that would embrace commercial air transportation, private flying, military aviation, research, and manufacture.

There have been a few scattered attempts to stage celebrations, but none of these was all-inclusive; none represented aviation in its entirety.

On December 17, 1934-37 inclusive, at Kitty Hawk, North Carolina, where the Wright Brothers' shoe-box plane took to the air for the first time and stayed aloft for all of 12 seconds, a National Aviation Day was staged on each occasion. I am informed that the event is still held, but on a local basis, which tears away the national aspect.

The Air Transport Association of America and the Aeronautical Chamber of Commerce cosponsored a National Air Travel Week on October 1-9, 1938. This was on a nation-wide scale, but it treated only one phase of the aviation industry.

And last year Army Air Force Day was observed for the first time, with additional such celebrations due this year and all those to follow. But here again we have only one aspect of aviation—the military end of it.

Why not an annual National Aviation Week—a seven-day period in which all of American aviation can partake? Why not a National Aviation Week to be proclaimed each year by the President of the United States as the starting gun for a celebration which would keep air-minded America looking to the sky?

One of the outstanding annual events is National Foreign Trade Week, which is sponsored by the United States Chamber of Commerce. Always set during the month of May, to include the 22nd, Maritime Day (departure date of the Savannah, first successful ocean-going steam vessel), it finds active participants among trade organizations, clubs, business firms, steamship operators, and others from coast to coast. The Chamber acts as a clearing house for all speeches, literature, and publicity.

Must the aviation industry be left behind? Certainly we have the wherewithal to make the proposed National Aviation Week a smashing success in every sense of the word.

It might be a good idea to set National Aviation Week somewhere around December 17 as a recognition of the Wrights' achievement. Proclamations can be read by leading officials, from the President down to the mayors of our cities.

There is a no more air-minded population than our own 140 millions. Interest is shared alike by the business man and the housewife, the returned war veteran and the student, the professional traveler and the tourist. The aviation industry has a great story to tell our people.

Let's get our shoulder behind the wheel and plug for a National Aviation Week to be sponsored by the official representatives of the scheduled and non-scheduled airlines, the plane and equipment manufacturers, institutions of education, and the Army and Navy.

Speaking as publisher of Air Transportation, and as chairman of the Aviation Section of the New York Board of Trade, National Aviation Week will be pushed from this direction for all it is worth.

Which national aviation organization will be the first to back National Aviation Week?

John F. Budd

AIRPLANES

[illegible]

headlines

UNDER THE DEADLINE

Announcement of an air agreement between Spain and the Netherlands has been made. The pact calls for two services: one between the Netherlands and Madrid; and the other between the Netherlands, Geneva, Barcelona, and the Spanish capital. . . Under annexes to the air treaty signed by Britain and Argentina, Britain has agreed not to transport passengers within Argentina, as well as to limit the number of through passengers on transatlantic flights. Moreover, the agreement provides that no other nation be granted better terms than those contained in the Anglo-Argentine treaty—which is a blow to United States air transport interests. . . Mexico is reluctant to admit additional competing United States airlines. It is reported that Mexican lines seeking to extend service to Texas will not be granted permission by this country until an agreement has been reached.

The Gloster Aircraft Company, England, has announced that Wing Commander Roland P. Beaumont, senior experimental pilot, flew a Gloster Meteor at speeds exceeding the world's record of 606 miles an hour. . . Rear Admiral Charles E. Rosendahl, best-known supporter of lighter-than-air craft in this country, has retired from the Navy. Retirement probably won't keep him out of the public eye. . . The inactivated Perry Air Base, Perry, Florida, has been proposed as the site for a market specializing in airborne foods.

Switzerland reports the beginning of construction of a new airport at Klotten at a cost of \$9,000,000. The landing strip at the Geneva-Cointrin field is being lengthened to 6,000 feet. . . Mayor William D. O'Dwyer of New York has appointed a special committee of city officials to renegotiate leases with airlines and oil companies at Idlewild Airport. The 13 airlines holding leases for space at the huge airport are opposing the mayor's contention that the contracts negotiated by the LaGuardia Administration are invalid. . . Non-scheduled airlines coming into Chicago Municipal Airport must pay a landing fee, according to a new ordinance passed by the Chicago City Council.

United States Airlines has requested the Civil Aeronautics Board to approve it as a common carrier of air freight between northeastern and southeastern areas. . . The Department of the Interior reveals that Alaskan pilots last year carried 53,850 passengers, flew a total of 15,847,000 passenger-miles, and airfreighted 2,908,000 pounds of goods. Alaska affords 34 airlines.

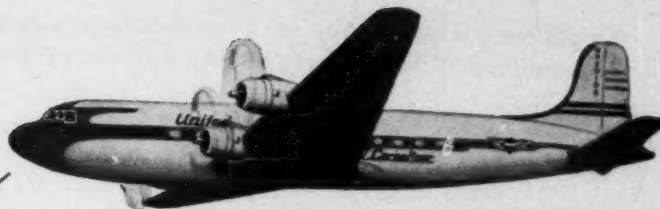
. . . The Dansaire Coupe, a small personal plane designed for use as a "family buggy," has been brought forward by the Dansaire Corporation, Danville, New York. Offering room for pilot plus two passengers, the craft cruises at 100 miles per hour or better.

Soviet Russia is working on new long distance planes that will carry between 50 and 60 passengers at a cruising speed of 300 miles an hour. . . The CAB has reopened the Latin American case with a view to hearing further arguments by commercial airlines whose original applications for Latin American air routes were denied. Three airlines are involved: Colonial, Eastern, and National. . . Leslie A. Bryan has taken over the position of director of aeronautics at the University of Illinois.

Due to the grounding of all Constellation planes, an embargo has been placed in effect on international air express by Pan American World Airways. Points affected are Lisbon, Brussels, Vienna, Prague, Dakar, Leopoldville, Monrovia, Auckland, Canton Island, and the Fiji Islands. . . The Boeing Stratoscruiser will be the first commercial airliner to use the General Electric engine turbosupercharger, thus enabling the plane to save up to a maximum of 14 percent in fuel consumption at cruising altitudes. . . New air freight outfit is Columbia Air Cargo, of Portland, Oregon, which has been organized by three former service fliers. The company is operating between Portland and Los Angeles.

Nonstop air cruises conducted by Waterman Airlines between New Orleans and San Juan, and from the latter city to New York, were inaugurated this month. Douglas 44-passenger Skymaster equipment is used. . . Use of radar ground installations in tests which are expected to reveal any possible application of radar to airport use will be utilized in plotting airborne traffic in the New York area study by the Air Transport Association. . . Air Service, Ltd., of Johannesburg, South Africa, has ordered pick-up equipment from All American Aviation. This would be used to inaugurate local air service in that country.

The Civil Aeronautics Administration has announced that effective August 15 there will be a charge of five dollars for the registration and recordation of aircraft titles. . . Administrator of Civil Aeronautics Theodore P. Wright has invited the National Advisory Committee on Aeronautics, the Air Transport Association, and the Aircraft Industries Association to participate in joint efforts to seek methods of reducing aircraft noise. He pointed out that there is a rising tide of public complaint which "threatens to undermine aviation progress."



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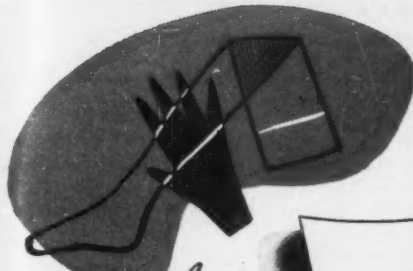
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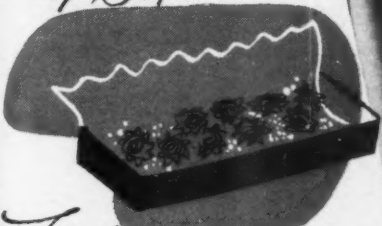
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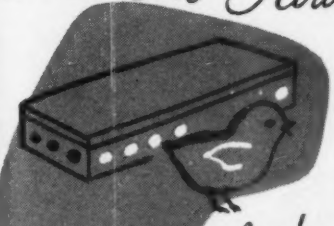
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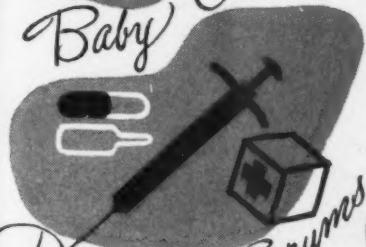
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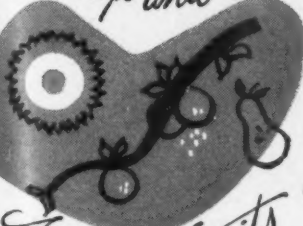
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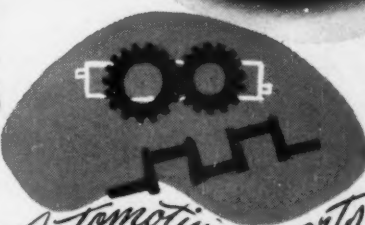
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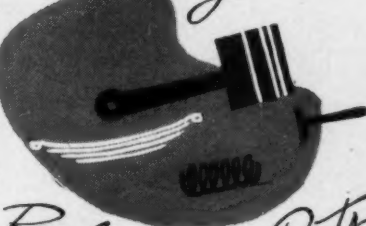
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Expanding Operations of Expreso Aereo Interamericano Keep Pace With Cuba's Rising Importance on Air Map



EXPRESO'S GUESTS—Members of the aviation press, all guests of Expreso Aereo Interamericano, photographed at Miami just before taking off on the last leg of their trip to Havana. On March 3 of this year Expreso hauled the first batch of international air mail under its new contract with the Cuban Government. The airline is flying mail at 8.3 cents per pound as compared with \$4 per pound before Expreso put in its bid. Expreso's advances in the field of passenger and cargo transportation are amply dramatized by the comparative figures shown below.

THE island of Cuba may be a dot on the map, but it is fast becoming one of the more important factors in the air commerce and air travel of the Western Hemisphere. Foreign airlines are making a bee-line for the Caribbean country, and out of Cuba reaches Expreso Aereo Interamericano, S. A., Cuban-owned and operated airline. By virtue of its expanding operations, Expreso is spreading Cuban influence to the United States, Central America, the West Indies, and Mexico.

Pretty soon Expreso's cargo and passenger planes will be seen winging in the direction of Mexico City, the Central American cities south of the Mexican capital, Jamaica, Haiti, Dominican Republic, and Puerto Rico. Lodestar equipment will be replaced by twin-engined DC-3s and four-engined DC-4s.

Longer routes? Expreso hasn't forgotten about those, but that's still a matter of the future. The company's consultants, Alvin P. Adams and Associates, have been studying the field, and probably will come through with specific recommendations not too long from now.

Of course, bigger planes need bigger airfields—and that's something to which Cuba must turn with dispatch. Expreso's present facilities at Havana are inadequate, and the airline is to move to an improved airport nearer the city; this field was recently given up by the Government.

That's not the only field to be improved. On the Isles of Pines there is Santa Fe; on the Cuban south coast, Cienfuegos; on the east, Santiago de Cuba; and in the center of the island country, Santa Clara—all to have modern airport facilities.

Expreso's comparative statistics for the last six months of 1945 and the first three months of 1946 make pointed reading:

	1945 July-Dec.	1946 Jan.-Mar.
Revenue Passenger-Miles	595,525	706,051
Cargo Ton-Miles	30,686	40,682
Mail Ton-Miles	1,194	6,435
Total Mileage Flown	211,319	167,390

Total Revenue Flights	792	1,458
Total Revenue Passengers	5,478	5,375
Total Pounds Cargo	196,668	369,535
Total Pounds Mail	27,450	23,171

It is reported that Expreso is seeking the acquisition of the Cuban subsidiary of Pan American Airways.

Eppley is Now With Porto Rican Express

Thomas J. Eppley, general traffic manager of Trans Caribbean World Airways, has resigned to take over the position of air traffic manager for the newly organized Porto Rican Express Company. Agents for Trans Caribbean and also for TACA Airways, the company is located at 145 Sixth Avenue, New York.

Eppley recently left the country on a tour to inaugurate a campaign for systemizing and streamlining the ground handling of air freight at airport terminals. It is also his aim to organize an air forwarding department within the structure of the company. A director of the Institute of Air Transportation, Eppley is a member of the Aviation Section of the New York Board of Trade, and of the Young Men's Chamber of Commerce in New York. He is a graduate of the Wharton School, University of Pennsylvania, and he has studied air transportation at New York University.

CAA to Open Office In Paris Next Month

The first of nine new foreign offices of the Civil Aeronautics Administration will be opened in Paris early next month. Slated to begin operations this year are offices at Cairo, Shanghai, London, Sydney, Mexico City, and two locations still unnamed. Existing stations are at Lima, Rio de Janeiro, and Balboa.

Howard W. Helfert, air carrier operations inspector, will be coordinator of the Paris office in addition to performing his safety regulation duties in connection with United States flag lines operating on the Western European continent.

AIR CARGO CONFAB



Air cargo men from three airlines—(left to right) George D. Rash, Continental Air Lines director of tariffs and schedules; M. E. Sullivan, Western Air Lines manager of tariffs and customs; and W. B. Price, Transcontinental and Western Air director of tariffs—shown meeting at the WAL offices to plan cooperative handling of air freight.

TWA announces a Winning Hand in AIRFREIGHT



You hold the winning hand when you ship by TWA Airfreight now. Recent improvements in our own service and arrangements with connecting airlines give you more reason than ever to use this fast, frequent service throughout the United States.

First of all, rates are *lower*—and on top of that a *single rate structure* for all commodities eliminates all former rate differentials.

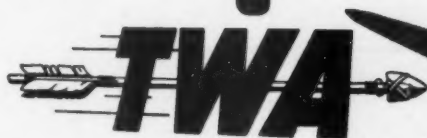
What's more, *every* TWA flight carries airfreight—including those record-speed, non-stop Constellation flights that *only* TWA provides within the United States.

And finally, interline arrangements with four connecting airlines (Braniff Airways, Continental Air Lines, Inland Air Lines and Western Air Lines) make it possible to offer direct airfreight service to *82 major cities* on a *single "air bill"* from shipper to consignee.

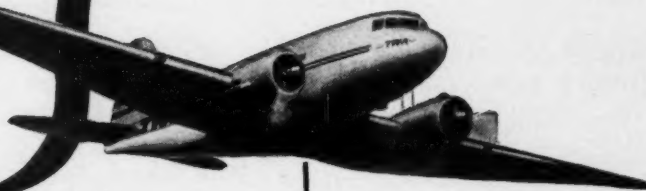
What more could you ask for? Door-to-door delivery? That's still available, too, to all cities on TWA's own routes. For full details phone your local TWA Airfreight office now.

**Less Transit Time—
More Sales Time**

**Airfreight by
TWA**



Direct one-carrier
air express service to Europe
and the Middle East, as well.





RUM BY AIR—Paul M. Aubin, glider pilot, shown delivering the first bottle of Don Q rum to I. M. Bomba, manager of the Schieffelin Import Division.

SEND-OFF FOR WINGED CARGO, INC.—Mayor Bernard Samuel of Philadelphia congratulating Colonel Fred P. Dollenberg, president of Winged Cargo, Inc., as Captain Raymond M. Baldwin, vice president (left), and Captain Carl W. Herdic, secretary-treasurer (right), look on.

GLIDING FREIGHT



MOTORLESS air transports have entered upon the commercial scene, and a Philadelphia-based outfit is making some gratifying strides in the right direction. Winged Cargo, Inc., is the first air cargo line to have been licensed by the Civil Aeronautics Authority to fly glider-tows.

Most recent accomplishment of the new company is a record glider flight from San Juan, Puerto Rico, to Newark Airport. The mark was hung up when Paul M. Aubin, pilot, and John J. Martin, co-pilot, crossed 900 miles of open water. This was the longest over-water glider flight on record. There was only one stop—at Charleston, South Carolina—during the entire trip.

On the trip to Puerto Rico, the Waco CG-4A glider towed by a Douglas DC-3 carried a cargo composed of Philco console radios, baby chicks, pharmaceuti-

cals, and women's dresses. The return trip found some 200 cases of Don Q rum, consigned to the Schieffelin Import Division, aboard.

At the present time Winged Cargo is operating along the Atlantic States to the South, and on to Cuba and Puerto Rico. The company has on hand four DC-3's and an equal number of CG-4A's. It is seeking to double its present equipment.

Colonel Fred P. Dollenberg, who heads Winged Cargo, is a graduate of St. Joseph's College, Class of 1940. Not unfamiliar with the art of flying, he was taken into the Army Air Corps at once. In his 14 months' service in the Pacific theatre, Dollenberg shot down 14 Jap planes and sank five ships—not a miserly number by any means. He particularly distinguished himself in the historic Battle of Bismarck Sea. His

decorations include the Distinguished Flying Cross, Soldiers Medal, Air Medal, Silver Star and Oak Leaf Cluster.

Vice president of the airline is Captain Raymond W. Baldwin, who enlisted in the AAF two months before Pearl Harbor and served in the Southwest Pacific zone. After V-E Day he was sent to Germany as one of a group of 60 officers designated to evaluate the Nazi Air Force. He is the holder of eight decorations for his achievements, including the Silver Star, Distinguished Flying Cross, Air Medal with three clusters, and the four times awarded Presidential Citation.

Captain Carl W. Herdic, Jr., is secretary-treasurer. Trained as a *Flying Fortress* pilot, he participated in raids over Germany. Herdic was decorated five times for gallantry in action.

Roth Supports Mitchell Bill

Almon E. Roth, president of the National Federation of American Shipping, in a statement before the Senate Committee on Interstate Commerce, vigorously supported the Mitchell Bill which would establish a National Air Policy Board. Calling it necessary for commercial as well as military interest, Roth also asserted that the CAB had placed "an utterly erroneous interpretation on the clear intent of Congress expressed in the Civil Aeronautics Act of 1938," and if allowed to remain, "the American Merchant Marine will be seriously affected."

27 Votes Make Montreal The Seat of PICAQ

Montreal has been selected as the permanent seat of the Provisional International Civil Aviation Organization. The proposal by the Chilean delegation that Montreal should be chosen was supported by the Peruvian, United States, Australian, and United Kingdom delegations. Paris was proposed by the Belgian delegation, while the Swiss offered Geneva, and the Chinese its own country. Twenty-seven votes were cast for Canada, nine for France, four for Switzerland, and one for China.

American Air Express Seeks Feeder Routes

American Air Express Corporation has asked the Civil Aeronautics Board to approve five new feeder routes: from New York to Miami; New York to Chicago; Boston to Chicago; Washington, D. C. to Omaha; and Seattle to San Diego. The airline will increase its fleet of DC-3's to 15, and expects to build hangars at New York and Los Angeles. Public financing of \$2,500,000 will be undertaken, according to John C. Lambert, president.

The airline's headquarters are located at 522 Fifth Avenue, New York City.

Missionaries to Cover Pacific Area in Plane

Even the rehabilitation of hundreds of mission posts on many small islands in the Pacific is leaning on the airplane. This is best illustrated by Rev. A. M. Stemper, of Caledonia, Minnesota, and Rev. Anthony Gendusa, of Chicago, two flying Catholic missionaries who have been assigned to the Pacific for life.

Recently the team of missionaries—Father Stemper is 33, and Father Gendusa 31—were checked out at Port Washington, Long Island in a Commonwealth *Trimmer Amphibian*, a twin-engined lightplane which they will operate in New Britain to fly food and medical supplies as well as the word of God.

Fathers Stemper and Gendusa are the first Americans of the Order of the Most Sacred Heart to serve in the Vicariate of Rabaul. In their plans they will cover 280,000 square miles of wild country.

Until a few months ago the priests had neither flying experience nor flying interest. It was Bishop G. J. Vesters, former Vicar Apostolic of Rabaul, who appealed for both an amphibian-type plane and pilot missionaries for work in New Britain, New Ireland, and the Admiralty Islands. The pooling of funds by the Sacred Heart Nuns of St. Michael's Convent, at Reading, Pennsylvania, brought the \$5,985 Commonwealth plane. This prompted Fathers Stemper and Gendusa to volunteer their services and shortly afterward they began taking instructions as pilots and mechanics at Wings of Mercy, Belleville, Illinois.

One-and-a-half years old, the Belleville organizations, supervised by Bishop Henry Althoff, provides free training for priests and brothers of all religious orders and volunteer laymen. It is understood that Wings of Mercy has ordered 25 *Trimmer Amphibians* for use by missionaries in Africa, South America, Borneo, the Arctic, the Philippines, and India.

Simplified Air Freight Service is Sought By 11 Scheduled Airlines

Action designed to simplify nation-wide air freight service is the goal of 11 major domestic airlines in filing, subject to approval by the Civil Aeronautics Board, an agreement governing consolidated air cargo tariffs. The agreement cites the need for interline service and equitable joint rates to provide adequate scheduled air freight service, and for elimination of unnecessary variances in classifications, regulations and practices of individual airlines.

The application was submitted by Capital Airlines-PCA. Concurring in the action were 10 other lines including American, Braniff, Chicago & Southern, Continental, Eastern, Inland, Mid-Continent, National, United and Western. It is proposed to publish and maintain consolidated tariffs. Each participant, however, reserves the right to determine ultimately its own regulations and rates to be charged on its routes.

HANGAR FLYING

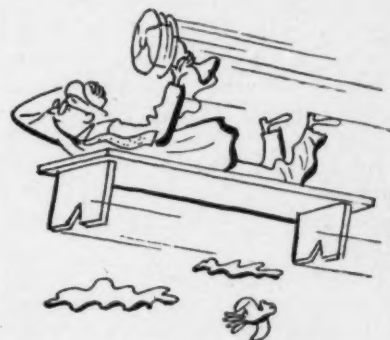


The Air-Going Bench

A weird flying test bench, with a name that sounds as if it belonged to an electric fan, was spawned by Lockheed engineers when they were figuring out the engine setup for the *Constellation*.

The test rig was a Lockheed Ventura with two *Constellation* power plants, and almost immediately it was nicknamed the Ventellation.

They used the Ventellation to check the findings coaxed out of conventional, earthbound wind tunnels and test benches. This plane showed them that their proposed arrangement (engine, cowl and accessories in one "power egg") made for easy maintenance: an engine can be changed in less than half an hour.



It also pointed up the economy and double safety of oversize engines. As every well-behaved engineer knows, small engines, running all-out, use up more fuel and get more wear and tear than large engines cruising at loafing power.

Result: The *Constellation* has 4000 reserve horsepower and can climb on any two of its four engines.

It's this kind of serious funny-business at Lockheed that makes better planes worth talking about.

L to L for L

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Short-Haul AIR TRANSPORT AND THE USER

Here is a comprehensive article on the economics of short-haul air transport from the viewpoint of the consumer. Cost and convenience are important factors, and Mr. Beitel examines these with a microscopic eye.

BACK in March, 1943, the Civil Aeronautics Board started its general *Investigation of Local Feeder and Pickup Air Services*.^{*} Hearings were held in October and November and an Examiners' report was issued in February, 1944. All during that time, the word "feeder" was bandied around the nation. The Board released its opinion in the "Feeder" Investigation in July, and the lowly word "feeder" was metamorphized into the new word "short-haul."

Both "feeder" and "short-haul" mean the same thing in air transportation parlance, but the word defies precise delineation. I certainly have no intention of debating the merits of particular definitions in this article.

At this writing, there are two short-haul air services in operation under certificates of public convenience and necessity issued by the Civil Aeronautics Board. They are the services of All American Aviation, out of Pittsburgh, and the new route of Essair, which runs between Amarillo and Houston.

We can certainly expect that, by the end of this year, from six to 12 more short-haul air services will be in operation. I do not think that the country will be blanketed by short-haul services, but I do believe that there will be a sufficient number in operation to measure the value of a short-haul transportation service performed by aircraft.

It would be presumptuous to attempt to predict now the ultimate merits of short-haul service. All that we have outside of the pickup service, operated by All American Aviation, is several months of operation by Essair and the plans and estimates of others. Those plans, however, can be examined critically, and certain conclusions can be properly drawn from them.

The approach of the user of short-haul air service is influenced principally by two things: the cost of the ser-

By **ALBERT F. BEITEL**

Former Civil Aeronautics
Board Examiner

vice, and the convenience of the service. Included in the cost factor is not only the price of the ticket, but also the overall cost of the service and the cost to the taxpayers. In the factor of convenience, there should be included the relative value of other forms of transportation.

Cost Element

The first element, cost, is hard to estimate because it is directly related to the type of aircraft used. Obviously a two-seater *Ercole* is not a practicable vehicle for short-haul air service. And, just as plainly, a *Constellation* is not a suitable vehicle. The ideal aircraft lies somewhere between these two.

When the first applications for short-haul air service were presented, they were presented on the basis of using eight-passenger aircraft. Since that time, some applicants have suggested the use of 14-passenger planes, DC-3 aircraft, and even the new Martin 202.

The element of cost of passenger fares is proportional to the cost of direct operating expenses, and the element of cost to the Government is proportional to the non-mail revenues developed by the short-haul carrier. The ordinary citizen who uses a short-haul passenger service thinks first in terms of fares, and it is the cost to him which often decides his use of any transportation service.

Airline passenger fares have been steadily reduced in the past eight years. In 1940 and 1941, they were fairly well standardized at five cents per mile; today they will average about 4½ cents per mile.

It is the custom in surface transportation to charge a higher per-mile

fare for a short distance than for a long distance. The railroads have done this, but they developed short-haul traffic by providing coach transportation at a much lower rate than first class transportation. The coaches are ordinarily not as luxurious as Pullman cars, but, on short distances, they are reasonably comfortable. And practically all short distance rail travel moves in the railroad day coach.

The reasons for the cheaper coach fare are apparent. A day coach seats about 100 persons; a Pullman car less than 50. While each Pullman car has an attendant, a day coach may have none at all, or one attendant may service two or more coaches. Coach seats are unreserved. Pullman space is allotted only through reservation.

Consequently, the short-haul rail fare was reduced because of the reduction in luxury services and luxury accommodations. While the railroads have developed more efficient equipment, the use of such equipment results in general reductions in both coach and Pullman fares; not in the short-haul fare alone.

The bus companies did not reduce their fares as the railroads did; that is, through the medium of reducing the luxury of their equipment. Bus fares started out at a level commensurate with the cost of providing the service and were reduced from time to time as more efficient equipment was utilized. Buses seemed to be ideally adaptable in short-haul service to points not served by rail. Some persons, however, were attracted to buses as a more comfortable form of transportation than the railroad day coach. Because bus fares are substantially less than Pullman fares, the bus operators found that they could sell luxury transportation to some passengers. Sleeper buses were developed and sleeper accommodations were sold at fares less than Pullman and more than ordinary bus fare. Thus, the buses arrived at a regular fare for

^{*} Docket No. 857, reported in 6 CAB 1.

regular service and an extra fare for a more luxurious service.

It is interesting to note that the railroads reduced their short-haul fares below their first class fares by reducing the luxury of the equipment, while the buses raised their long-haul fares by making their equipment more luxurious. Water carriers arrived at two fare levels by virtue of the relative merits of different parts of the same ship, or by mixing freight and passenger service.

Because of the passenger fares set by rail, water, and motor carriers, the American public has become accustomed to paying less for transportation in the day coach, and more for transportation in the more luxurious Pullman cars. This is a natural result of economics. Nobody would pay more to ride in a day coach than in a Pullman car. Nobody would pay more to travel in a freighter than on a passenger liner.

Transportation by Air

Let us now turn to air transportation. The ordinary feeder or short-haul service is based upon passenger fares at about five cents per mile. At the same time, it is contemplated that certain services, such as cabin attendants, meals aloft, and reservations, will be eliminated. The short-haul service passenger fare seems to be higher for a less luxurious service. Such an arrangement appears to be exactly the opposite of what it should be.

Wherever the short-haul air carrier is in competition with the trunkline carrier, the effects of this situation become apparent. Essair, for example, competes with Braniff between Austin and Houston. Braniff's fare is \$7.70; Essair's fare is \$7.70. Braniff's fare is 5.2 cents per mile, and Essair's fare is 5.2 cents per mile. Between Lubbock and Abilene, however, Essair is the only air carrier. Its rate of fare on this segment is 5.9 cents per mile, or 13 percent higher than the Austin-Houston rate.* The air mileage is almost the same: 151 miles compared with 155 miles.

This is not meant to be a criticism of Essair. Non-competitive fares are customarily higher than fares between competitive points. It is commented upon to illustrate the point that short-haul services cannot develop business over competitive segments of their routes, unless the trunk fares are met.

It would seem, therefore, that over segments of routes served by trunk carriers, the short-haul air carrier cannot offer a lower fare for the less luxurious

equipment. Short-haul air service over competitive segments of routes cannot be expected to reduce the fare to the user, even though less luxurious equipment is operated. Such a service, however, does have other benefits: it creates a competitive spur to other carriers and gives additional schedules to the passengers.

The effect of this fare situation will be to raise the rate of short-haul fare over non-competitive points. If we take the Essair fare of 5.9 cents per mile, we will have a standard for entering upon a discussion of the comparative value of short-haul air transport to the user, as related to the other means of transportation.

Air transportation offers one principal advantage to the user: *speed*. Short-haul air service must offer this same advantage, if it is to compete effectively with ground transportation. It can do this without difficulty on some routes; on others, it cannot.

One aspect of the time saving of short-haul air service is found in its fluidity of operation. A railroad train operates over steel rails; a bus moves over concrete highways; but the airplane is not bound to follow an established path based upon surface configuration.

Thus, by using aircraft, a short-haul operator may lessen the distance between points and thereby decrease the travel time. Because airplanes operate at faster speeds than trains and buses, the air service is ordinarily faster than surface transportation agencies.

I say ordinarily faster, because the passenger is interested in getting to a particular place in a city, not just to the air or rail terminal. In any consideration of the merits of short-haul air service compared with surface transport, some attention must be devoted to the problem of traveling between

the terminal and the actual point of destination.

In the course of a recent CAB hearing, one applicant proposed to reduce overall air transport time by flying amphibious aircraft between Idlewild and other imports down to the East River seaplane base at 23rd Street. According to this applicant, the travel time between Idlewild and downtown Manhattan can be cut 45 percent.

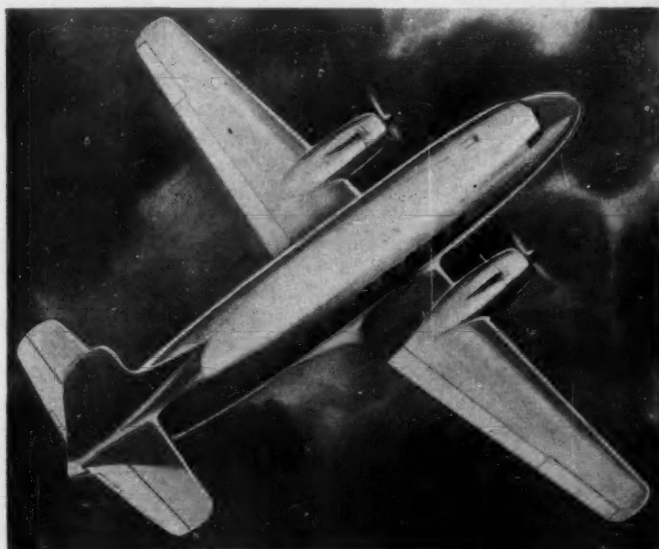
St. Louis Plan

The City of St. Louis now has under consideration a new downtown transportation terminal where airplanes can land on runways erected over the yards of the railroad station. Until such plans as these are translated into actualities, the short-haul carrier is still faced with the airport-to-city center distance in computing the advantages of speed offered by the air service.

Examiner Fredricks, in his report in the *New England Case*, has devoted considerable attention to this subject. He included in the air schedules the time required to drive to and from the airports. He found that in many cases the overall air time was in excess of the surface time. Between Boston and Providence, for example, the distance is 33 miles. From city center-to-city center the air time is 14 minutes longer than the rail time.

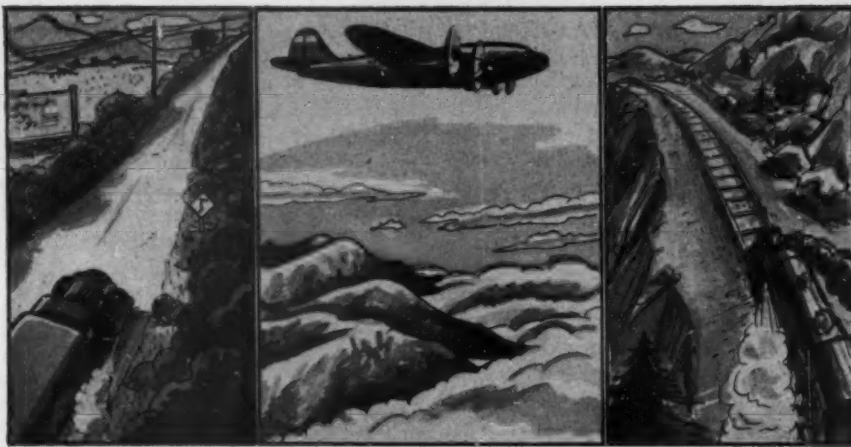
Thus, for the intercity passenger in some sections of this country, short-haul air service may prove not only more expensive than rail service, but it may also be longer.

It should be remembered, however, that some short-haul air passengers use the service as the means of making a connection with a long-haul service. In New England, such connecting traffic amounts to about 35 percent of the total short-haul traffic. For airline connections, the short-haul air service is



MARTIN 202—Glenn L. Martin's new twin-engine transport designed for travel over ranges of from 250 to 700 miles. Beitel states that to compete effectively with ground transportation, short-haul service must offer its principal advantage—speed!

*These rates were current at the time of writing.



FULL SPEED AHEAD—"One aspect of the time saving of short-haul air service is found in its fluidity of operation," writes the author. "A railroad train operates over steel rails; a bus moves over concrete highways; but the airplane is not bound to follow an established path based upon surface configuration."

usually faster than ground transportation.

New England, of course, is not representative of all of the United States. Sometimes a short-haul air service can offer astounding savings in time, because of the absence of rail and motor services. In California, for example, it requires 18 hours to travel between Eureka and San Francisco by rail or bus, but only $2\frac{1}{2}$ hours by air. This is no more extreme an example than the Boston-Providence example.

Since it is not feasible to average the distance between city-center and airport, no absolute criterion can be drawn of the value of air service.

However, a rule of thumb can be applied. It is apparent that the speed factor of short-haul air service decreases as the distance between airport and city-center increases. It is also clear that as the intercity distance increases the speed factor increases. Thus, there is an inverse proportion between speed and airport-to-city center distance and a direct proportion between speed and intercity distance. By applying these rules to known geographical factors, it can be logically inferred that the speed advantage of short-haul air service is lowest in the industrial area between New York and Boston and highest in the sparsely-settled areas of the West and Southwest. A corollary is that the user of short-haul air transport in the South and West will be better served than the user in New England.

Because of the better service, a greater per capita volume of short-haul traffic can be expected in the South and West. As the traffic increases, it can be expected that passenger fares will decrease.

There is, however, a plan which might result in the reduction of passenger fares in the industrial areas. Several companies have studied the

problem of passenger fares on short-haul service from a different approach.

Instead of using small equipment designed to serve the small city airport, they have suggested the use of large equipment at a lower fare. Their approach to the problem is similar to the railroad's approach. They would eliminate certain passenger services, and operate the aircraft as though it were a day coach. In this manner, it is thought that high load factors can be maintained and air fares may be reduced to $3\frac{1}{2}$ cents per passenger mile.

Intercity traffic between large communities like Washington-Baltimore-Wilmington and Philadelphia might well patronize the day coach type airline service and provide the load factor required for the low fare. Such large aircraft, however, are not suited to the transportation of persons between the smaller communities, because a high load factor cannot be consistently maintained at a reasonable cost.

Two Types of Service

A solution to the problem of furnishing short-haul air transportation at reasonable rates and at greater speeds may lie in the provision of two types of service: the $3\frac{1}{2}$ cent fare in large airplanes between large cities where the time savings over surface transportation are not impressive, and the five- or six-cent fare in small airplanes between smaller communities, where the time savings over surface transport are relatively great.

Another cost factor which affects the user of short-haul services is the factor of cost to the Government. The proponents of the day coach air service maintain that they will not require air mail subsidies for their operations between large cities. This is probably true, but this does not mean that cost to the Government is no longer involved.

If day coach airlines operate at a $3\frac{1}{2}$ cent fare between the large cities now served by air, a considerable portion of air traffic will be diverted from the trunkline operators.

It does not seem likely that any great number of day coach airlines will be permitted to operate because the division of traffic will adversely affect the operation of presently-operating carriers. I do not mean to say that no such services will ever be inaugurated; I do not mean that the number of such services will be limited by the amount of traffic now flowing over established routes. The CAB will consider the effect on other carriers in the cases involving day coach airlines. Unless the Board is convinced that the new service will not divert substantial traffic from the present operators, it would not authorize the service.

In the local and feeder field, the factor of cost to the Government is a very important one. When Examiner Madden and I issued our report in the Feeder Investigation, we mentioned that a comprehensive national pattern of local service would require mail subsidies of about \$30,000,000 per year, at the arbitrary rate of 25 cents per mile. To us that seemed like a lot of money. A member of Congress called, however, to make sure that we were right.

"Do you mean that it would cost only 30 million dollars?" he said.

Perhaps it is old-fashioned to talk about millions instead of billions. Perhaps it is old-fashioned even to mention cost to the Government. But I would point out that normal air mail payments to the operating carriers have not reached the \$30,000,000 mark. In 1942, total payments amounted to \$23,000,000.

I should also stress the fact that the members of the CAB have recently laid emphasis upon the desirability of a sound air transportation system, and it is a goal greatly to be desired.

To this writer an economically sound air transport system does not mean either large air mail subsidies or no subsidies at all.

Air transportation for persons, property and mail should not be denied a community merely because the passenger revenue does not offset the cost of providing the air transportation. In 1943, only American Eastern and National received non-mail revenues which amounted to as much as their operating expenses. Every other carrier relied upon mail revenue in order to break even.

There is, of course, a difference between air mail compensation and air mail subsidy. The CAB has set two rates, 60 cents and 45 cents per ton-mile of mail carried, which are generally

considered to be approximately the rate of mail pay which is reasonable compensation for the services performed. Any air mail compensation over the amount paid by the Post Office Department for value received is considered by some to be a "subsidy," paid in accordance with the terms of the Act. This may be generally accepted as accurate, provided the service rate is fixed in accordance with the cost of the service. If American, for example, can carry mail at 45 cents per ton-mile and make a reasonable profit, the payment of a larger amount would be an overpayment. American contends that it can transport the mail for 45 cents over its domestic routes.

However, it would not be logical to say that 45 cents is the proper service rate for all air mail transportation. All American Aviation operates routes out of Pittsburgh, and carries air mail. It costs the company more than 45 cents per mile to operate its pickup service.

High Value of AAA

The company operates efficiently and economically, but it could not carry mail for 45 cents per ton-mile. It operates a pickup service and provides air mail service at a number of communities which are without airports. The points served by it are about 15 miles apart, and it must serve each point on every schedule. The value of AAA's service to the Post Office Department in number of cities served is considerably more than that of any other domestic carrier. The mail rate to be paid for this service could, therefore, be considerably more than that paid to other carriers.

No mathematical formula has ever been devised which will determine the point where compensation ends and subsidy begins. The Civil Aeronautics Act contemplates the payment of subsidies to air carriers when necessary to continue their operations.

Because of this fact, the CAB will be ever mindful of the element of cost to the Government involved in a new air service. If the cost became excessive, the users of air transport and the general public would be affected adversely.

Several methods have been suggested for keeping the cost of short-haul air service within reasonable limits. The only suggestion which the Board has adopted, however, is the issuance of temporary certificates for new services which may prove excessively costly. The theory of the temporary certificate is that, if an operation is unreasonably costly, it will be terminated at the end of the temporary period.

It is generally conceded that, initially,

THIS IS THE THUNDERJET



Here's the Army Air Forces' newest jet fighter plane, the Republic P-84 Thunderjet, which has been revealed to have a speed of more than 590 miles an hour, a service range of 1,000 miles, and a service ceiling topping 40,000 feet. Designed and built at Republic Aviation Corporation's Farmingdale, Long Island plant under the joint supervision of Republic and the Air Materiel Command, the jet plane is about the same size as the Lockheed P-80 Shooting Star. It is heavier, however, weighing approximately 1,000 pounds more than the P-80's four tons.

short-haul air services will have to depend upon air mail compensation for some revenue. Essair, after three months of operation reported average costs of 74 cents per mile and non-mail revenue of 18 cents per mile. These figures include the first month of operations, and should not be regarded as typical. For two months, the per mile cost was 66 cents; the non-mail revenue, 24 cents. During these two months the carrier hauled 4,382 ton-miles of mail. At the 45-cent rate paid to American Airlines, its mail compensation would have been 1½ cents per mile, whereas the carrier actually lost 42 cents per mile on its operations. The Essair figures are for a very short time. The Board, however, set a mail rate for Essair at 25 cents per mile, temporarily, and is subject to revision upward or downward as the carrier may require.

Essair's operation showed a passenger load factor of 56 percent in the third month of operations, which is a fairly high load factor for a new operation. But this was not nearly sufficient to offset the cost of the service.

It would seem from this decision that the CAB does not expect Essair to be economically self-sustaining for the next year or it would have made the rate less. On the other hand, the CAB apparently expects costs to be reduced or the non-mail revenue to be increased, or it would have established a higher mail rate.

Under present conditions and with present equipment, it does not seem likely that mail rates of less than 25 cents per mile would be appropriate for short-haul carriers. Such rates, when applied to passenger carriers might involve an element of cost to the Govern-

ment, over and above the reasonable rate for the service rendered.

So long as short-haul air service is subsidized, its expansion cannot be great. As the service is commenced in certain sections of the country, and the results of operations are reported, we will be in a better position to appraise the cost of the service from the standpoint of both the Government and the user.

Improved Equipment

Another factor to be considered in connection with the cost of short-haul service is the economies effected by the use of improved equipment. If equipment can be developed which will operate over short distances at less cost than the *Beechcraft*, the *Electra* and the *Saturn*, we can expect the cost of short-haul air service to the user and to the Government to be reduced.

In summary, it seems to this writer that short-haul air service will be operated this year at passenger fares ranging between five and six cents per mile. The cost of this service should be progressively reduced because of improved equipment and other economies of operation developed through experience.

Short-haul air service this year will probably cost the Government between 25 and 35 cents per mile in mail compensation, but this cost should likewise be reduced through the development of additional non-mail revenues.

Such costs are reasonable ones. While not adapted to an immediate expansion of service on a large scale, they are well adapted to the inauguration of some short-haul services throughout the country. The user of air transport will soon be in a position to fly to many of the smaller communities of the nation.

NON-SCHEDULED OPERATIONS:

Some Questions and Answers

THE Civil Aeronautics Board has supplied a number of questions and answers "as a further guide to proper understanding of the Board's requirements affecting non-certificated operations:

1. Q. *What is the status of contact carriers?*

A. Whether scheduled or non-scheduled, they are not subject to the Board's economic regulatory powers. Except for aircraft and airman safety requirements and air traffic rules, relevant provisions of the Act apply only to common carrier operations. Contract or other non-common carriers are not affected by Part 42 of the Civil Air Regulations or by the Exemption Regulation. Contract carriers, however, should fully inform themselves as to the circumstances whereby common carriage may evolve from what initially is a contract operation.

2. Q. *Are intrastate carriers regulated?*

A. If the operations, whether scheduled or non-scheduled, are solely within a single state and do not involve carriage of interstate traffic, they are not subject to the Board's economic jurisdiction. Such intrastate carriers must observe aircraft and airman safety requirements and air traffic rules but are not required to obtain air carrier operating certificates.

3. Q. *How is charter service regulated?*

A. The term is too loosely used to have significant legal meaning. The tests are whether the operations are (a) interstate, (b) common carriage, and (c) scheduled. Most operations described as charter service appear to involve interstate common carriage but may be scheduled or non-scheduled depending upon the scope and regularity of operations between any two given points.

4. Q. *Is there any special authority for services between two points not served by regularly scheduled airlines?*

A. No. Under the Exemption Regulation, non-scheduled service may be performed between any two points whether or not such points are served by a certificated air carrier. Scheduled service may not be performed until the operator has been issued a certificate of public convenience and necessity authorizing such service.

5. Q. *Will the proposed new exemption regulation put non-scheduled operators out of business?*

A. No. The proposed amendment No. 3 of section 292.1 does not materially differ from the existing Exemption Regulation insofar as it relieves nonscheduled operators from obtaining certificates of public convenience and necessity. It is proposed, however, that larger non-scheduled operators be required to comply with certain other provisions of Title IV of the Act concerning tariffs, rates, carrier relationships, etc. This proposed regulation is in tentative form. Comments are invited from all interested persons and will be considered in drafting the regulation for final adoption. Extensive regular services, even though represented to be non-scheduled, have never been authorized by the Board in any manner other than by issuance of a

certificate of public convenience and necessity as required by the Act.

6. Q. *What is the 10-trips-per-month rule?*

A. The proposed regulation would regard a service involving more than 10 round-trips per month between the same two points for a period of two consecutive months as a scheduled operation, unless due to unusual, emergency, or non-recurring conditions. However, the 10 trips is not the exclusive test. A lesser number of trips establishing a pattern of service involving reasonable regularity would also, as it now does, constitute scheduled service requiring certification.

7. Q. *Is the Board authorizing establishment of any new scheduled airlines?*

A. Yes, whenever the requirements of public convenience and necessity are demonstrated in a public hearing. The suspension of all such proceedings required during the war has been terminated. Since March 28, 1946, the Board has granted certificates (for three-year trial periods) to seven air carriers not previously certificated. In addition, there are pending seven unfinished "area" cases, each involving numerous applications covering a large section of the United States, which are under active consideration with prospects of additional authorizations to new carriers. In addition, a consolidated proceeding, involving applications for exclusively air cargo services throughout the United States, is soon to be heard.

8. Q. *How are the Exemption Regulation and Part 42 of the Civil Air Regulations related?*

A. They are of equal applicability except for effective dates.

- (a) They neither apply to nor authorize scheduled air transportation.
- (b) Intrastate carriage is not affected.
- (c) Contract carriage is not affected.
- (d) Non-scheduled operators are required to file registration statements with the Board by July 15, and applications for safety operating certificates with the Administrator by August 1, 1946.

9. Q. *What is the status of express companies, forwarders, and travel agencies?*

A. Persons who undertake generally to arrange for interstate common carriage by air for others, but do not operate aircraft, are termed "indirect air carriers" by the Act. The Exemption Regulation does not apply to indirect air carriers. Their activities can be conducted only after they have obtained a certificate of public convenience and necessity, or an exemption order supported by a showing of the requisite "limited extent," "unusual circumstances," and "public interest."

10. Q. *What was the decision of the Board in Docket 1501. Investigation of Non-scheduled Air Services?*

A. (a) That the principles of the existing Exemption Regulation should temporarily be continued in effect; (b) that non-scheduled operators should be required to file registration statements; and (c) that further regulation of non-scheduled operators should be deferred until additional data had been accumulated and comments received after public circulation of the proposed new regulation.

New Cross-Country Airline

Another non-scheduled transcontinental air cargo line has stepped into the air transport picture with the organization of Ranier Air Freight Lines, Inc., which is based at Boeing Field, Seattle. Headed by William A. Edgar, RAFL is operating two C-47s, with a third such plane and a C-54 to be acquired.

OPERATION BUCKET SEAT

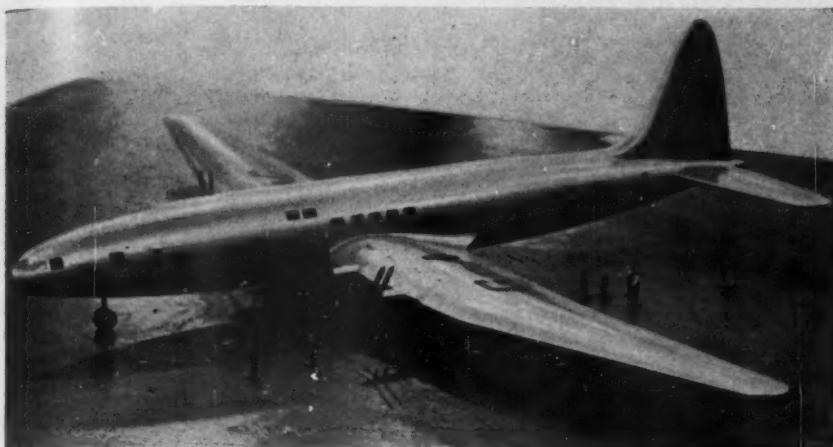


Part of the 166 delegates to the first annual convention of the American Veterans Committee as they appeared at LaGuardia Field just before they took off last month for Des Moines, Iowa. Six non-scheduled airlines pitched into the job of transporting the war vets: Meteor Air Transport (above), American Air Express, Willis-Rose Airlines, Viking Air Transport, International Airlines and Atlantic, Gulf and Midland Air Transport. Planes were also used in bringing in delegates from other parts of the country. Youngest passenger from the New York group was 8½-month old Cheryl Faw, daughter of ex-Marine Captain Duane L. Faw. Cheryl flew out to Des Moines via bucket seat, but Captain Kenneth Johnston of Meteor had her put up in style on the homeward leg of the trip by rigging up a laundry hamper crib.

AIRPORTATION NEWS

[REG. U. S. PAT. OFF.]

BRITAIN'S BRABAZON I



Named after Lord Brabazon, president of the British Government committee appointed to recommend types of airliners, the 110-ton craft (model above) is under construction on a golf course by the Bristol Aeroplane Company. The biggest landplane yet made in Britain, the Brabazon I will have a cruising speed of 250 miles per hour, and is designed to carry 224 passengers on short hops and 100 on transatlantic trips. It will be 117 feet long, 52 feet high, and have a wing span of 230 feet. Appointments will include sleeping compartments, lounge, bar, dining room, and movie.

Air Messenger Service From Chicago to Cities in East

An air division has been inaugurated by the Eastern States Messenger Service at the Chicago Municipal Airport. The company is offering six-hour air express shipments from the Windy City to major cities along the East Coast.

Originally a local New York business, getting its start about a decade ago, ESMS has since expanded to Boston, Bridgeport, Buffalo, Chicago, Newark, Philadelphia, Providence, and Washington. An office will be opened in Detroit, with Cleveland and Pittsburgh on the "possible" list.

The air division almost developed itself. With customers demanding that their shipments meet the earliest cargo-carrying plane, ESMS found itself handling more and more such air express. Advertising agencies and publishers with last-minute plates were particularly good customers.

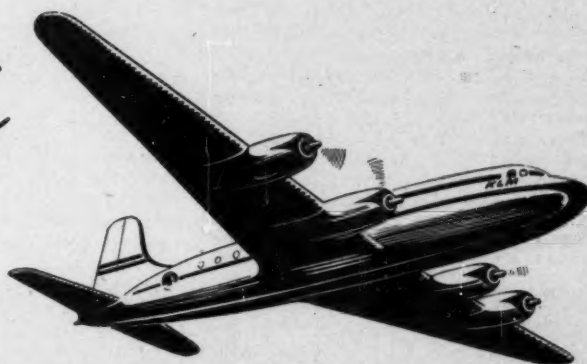
ESMS operates in this manner: Packages received at the Chicago airport office are rewrapped or readdressed to itself at the airports of the cities it serves, turned over to the Railway Express Agency for carriage, and picked up for special messenger service at the other ends. Twenty-four-hour service is offered. The charge is two dollars over and above the normal REA charge.

Cessna Ahead of Schedule

Cessna Aircraft Company is one month ahead of its originally promised production schedule for its light, two-place, personal plane models, the 120 and 140.

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WEST INDIES DIVISION

Special Recognition of Exclusive Air Cargo Carriers is Sought by the Newly Organized Independent Airfreight Association, Inc.

HEADED by Robert W. Prescott, president of the National Skyway Freight Corporation, the Independent Airfreight Association, Inc., has burst upon the air transport scene "to serve the mutual interests of airlines engaged exclusively in carrying freight, and to foster regulation in the public interest."

The trustees of IAA are the top men of three of the biggest non-scheduled air cargo airlines: Earl F. Slick, president of Slick Airways, Inc.; Harry R. Playford, president of United States Airlines, Inc.; and Prescott. All three are pilots and war veterans.

"The outstanding companies of this new postwar industry," Prescott declared, "formed this association to gain recognition for this established business as distinct from the subsidized airlines, carrying passengers, mail, and express. The association was formed to represent only these companies engaged exclusively in the business of transporting freight by air."

"These companies were created and established without benefit of Government aid or subsidy, or without the assistance of the taxpayers' money in any form. The total investment in these companies, exclusively from private sources, now amounts to approximately \$10,000,000."

The exclusive air freight industry will ask the Government, through the Civil Aeronautics Board, for the following things:

"1. Recognition of the essential differences inherent in the transportation of freight by air as distinguished from the carriage of passengers, property and mail by air, and recognition of two distinct types of carriers, one of bulk freight, and the other, passengers, mail and express."

"2. Recognition of the essential differences between the subsidized and non-subsidized airlines."

"3. A classification of air carriers engaged exclusively in the transportation of air freight be established under authority granted in the Civil Aeronautics Act. Under this classification these companies would operate as common carriers until

such time as the CAB, through experience, may establish the basis for equitable permanent regulation and, after a fair hearing, may grant permanent certificates of convenience and necessity to carry freight exclusively."

"4. Regulation of freight tariffs that will bar cutthroat competition and assure fair and equal opportunity to all engaged in the air freight business."

Actually the formation of the Independent Airfreight Association mirrors the seven-league strides that commercial air cargo has taken during the past year or so. The graphline has shown a steady upward climb from month to month. During the month of May alone, some 2,000,000 ton-miles were flown by members of the IAA—this record with 35 twin-engined aircraft. It was pointed out that air express rates before the war were at 80 cents a ton-mile, today the level is at 61 cents a ton-mile.

"The air freight industry already has demonstrated its public service in strengthening distribution, the weakest link in the American economic system," the IAA president said. "In less than a year since its birth it has passed from the experimental stage, and is here to stay. Air freight already has opened new markets for agriculture and industry, and helped to raise the American standard of living. It serves the public interest. It seeks only a fair opportunity to demonstrate its right to live."

Prescott, a former Navy ensign, resigned his commission to join the immortal Flying Tigers in China in 1941. He shot down a half-dozen Jap planes during five major campaigns and returned to the United States in July, 1942, after group disbanded. He became a TWA pilot, and assisted in the airline's contract operations for the Air Transport Command. Prescott returned to China in 1943 as a captain for the China National Aviation Corporation. He was engaged in flying all types of cargo over the Hump between China and India; and when he returned to the United States the following year he became connected with the Mexican airline, Aerovias Azteca,

employed in organizing personnel and purchasing aircraft and supplies. This lasted six months, the next step turning out to be his taking over the presidency and directing management of the Flying Tiger Line.

Slick is the 25-year old son of the late Tom B. Slick, well-known oil figure. An ex-ATC pilot, he joined with Colonel Samuel C. Dunlap, III, last year to form Slick Airways, Inc., with \$1,120,000 paid-in capital. Back in 1941 young Slick left Yale University to work in the oil fields, but joined the Ferry Command the following year to deliver all types of aircraft around the world. He was released from active duty in December, 1945.

Playford is a veteran of the First World War in which he fought as a member of the 96th Day Bombardment Squadron of the Army Air Forces. In the last war he served as national executive and supply officer of the Civil Air Patrol until it was taken over by the AAF. Four years ago he became a director of National Airlines, and supervised the operation of a training school for the ATC at Jacksonville, Florida, and later a training program at Knoxville, Tennessee, for Air Corps cadets. Playford is a director and one of the principal stockholders of Alaska Airlines, president of United States Flying Services, and a director of the National Aeronautics Association.

Headquarters of the Independent Airfreight Association are in the Graybar Building, 420 Lexington Avenue, New York.

Willis Air Service, Inc., Now The Commander Line

The Commander Line is the new name of Willis Air Service, Inc., which has been recapitalized due to expanded operations. This announcement was made by Charles F. Willis, Jr., president of Willis-Rose Airlines, Inc., which owns and operates the line.

Two new officers have been appointed by Willis: Robert Rose, prewar American Airlines pilot and a lieutenant in the Navy Air Transport Service, who has taken over the post of assistant to the president; and Stanley Rumbough, Jr., former Marine Corps pilot, now vice president in charge of sales and traffic.

Operating a half-dozen DC-3s and a DC-4, the airline flies freight and passengers throughout the United States, and to Canada, Puerto Rico, Cuba, and Colombia on a non-scheduled basis. The Commander Line maintains offices in New York, Chicago, Boston, Baltimore, Los Angeles, San Francisco, San Juan, Havana, and Kingston. All of its officers and employees are war veterans.

Norseman to Fly Freight Between New York, Naples

Norseman Air Transport, Inc., has signed an agreement for chartered cargo flights between New York City and Naples, Italy. The contract for the operations is expected to be signed with a major Italian import-export firm which has its headquarters in Naples and offices in New York.

According to Robert C. Averill, president-treasurer of the airline, actual operations will be contingent on the acquisition of additional aircraft. He said that Norseman cargoplanes would stop at Nova Scotia, Newfoundland, the Azores, Casablanca, Algiers, and Tunis for refueling and maintenance during the transatlantic flights.



BIG THREE—Talking over plans of the newly organized Independent Airfreight Association are (left to right) Earl F. Slick, president of Slick Airways; Harry R. Playford, president of U. S. Airlines; and Robert W. Prescott, president of the National Skyway Freight Corporation (Flying Tiger Line). All are trustees of IAA.

Air Associates, Inc., Shows New-Type Tie-Down System

A new-type air freight securing system known as the Davis Cargo Tydown Gear, developed by F. L. Davis, is announced by Air Associates, Teterboro, New Jersey. The new device incorporates the use of a webbed strap equipped with hooks and buckles, and a unique blanket, both of which are employed to secure airborne freight from shifting while the cargo plane climbs, turns, descends, or is buffeted by winds.

Both the tie-down strap and the blanket are adaptations of equipment originally designed for use in Navy ambulance planes where quick attachment and releases of securing devices was of prime importance. In addition to its speedy attachment and release characteristics, the new cargo tie-down strap can be varied from its greatest length to two feet without reducing holding efficiency. One end of the strap is fitted with a permanently secured metal hook for attachment to wall or floor rings of the airplane, while the other end is free so that it may be inserted through a quick-adjusting, friction-locking buckle, and easily secured at any point along the strap's length.

In the loop formed by passage of the free end through the quick release buckle a second metal hook is provided which is free to ride on a rotating sleeve. Its design is such that it constitutes a block and tackle type arrangement whereby tension can be increased on the strap at any time. A feature of the buckle is a crossbar which automatically collapses at a predetermined



SECURE FOR FLIGHT—Davis Cargo Tydown Gear demonstrated in an American Airlines Airfreighter. The new tie-down system was designed and developed for Air Associates, Inc. by Frank L. Davis.

pressure before sufficient tension to pull out the rings incorporated in the airplane structure can be applied to the strap. A separate metal link for cross latching one or more straps is also included.

The six-by-eight-foot cargo blanket, designed for use in conjunction with the strap, is made of heavy duck and reinforced across and down at intervals with webbed

straps. At the end of each strap and wherever the straps cross, loops are provided for attachment of hooks. With this arrangement, the blanket can be folded for use with smaller size articles and still be strapped from any point to the plane structure. In addition, through the use of S hooks, several blankets can be joined to form a continuous blanket strip without decreasing tensile strength. The hooks are inserted through metal rings or grommets on a side and end of each blanket and the corresponding loops at the alternate side and end of the next blanket.

Beech-Fokker Negotiations In Preliminary Stage Only

Acting to scotch rumors and reports to the effect that Beechcraft and the Fokker Aircraft Works in the Netherlands have made definite arrangements for mutual cooperation in the design and manufacture of aircraft, Walter H. Beech, president of the Beech Aircraft Corporation, explained that negotiations are in the preliminary stage only.

The two companies will explore the possibility of the licensing of Fokker to make certain types of Beechcrafts in Holland. At the present time Beechcraft is producing a high performance, single-engine, five-place airplane and a twin-engine eight-nine place airplane. Beech will shortly announce the details of an advanced high performance four-place, all-metal, single-engine airplane and a new 20-passenger feederline transport especially designed for operation from small airports.

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Air Conditioned Commandos Developed by Slick Airways

After months-long tests, engineers of Slick Airways have succeeded in air-conditioning the interiors of their C-46E airfreighters to a point where temperatures of precooled or refrigerated shipments can be protected in flight and on the ground.

The feat of controlled cooling of an entire plane cabin, which in a *Commando* consists of 2,000 cubic feet of usable cargo space, has never before, to the knowledge of Slick Airways engineers, been accomplished. They point out, however, that refrigerated compartments have been installed in planes at one time or another. It is well known that altitude temperatures are un dependable for cooling cargo cabins.

Cooling of the Slick commercial airfreighter's cargo cabins was achieved first by insulating the entire interior with three- and four-ply lightweight Fiberglas specially designed for the big twin-engined planes, and then installing an aluminum alloy cooler charged with dry ice over which air is blown by the plane's regular blower system. The cooler, also specially insulated, consists of a large compartment of trays on which 10" x 10" x 1" slabs of dry ice are placed. The system operates both in flight and on the ground.

In a recent test, precooled vegetables whose temperature measured 46 degrees were loaded into a plane cabin in San Antonio, the ship allowed to set on the ground in 92-degree Texas heat for three hours, and then flown to Houston. The plane's huge 6 x 8½-foot doors were opened at intervals on the ground to simulate unloading stops. When the vegetables were off-loaded at Houston more than four hours later, their temperature had increased less than two degrees.

Since then, planeloads of precooled commodities have been flown across the continent with an increase of only one to five degrees in temperature. An ordinary transcontinental run is made by Slick airfreighters in 19 hours.

Chief Engineer Gene Winchester of the Slick staff has provided a sprinkler system whereby, on hot days when the skin of the plane may reach 150 degrees on the ground, water may be used to cool the metal fuselage while the air-conditioning equipment cools the interior. He also specifies that the standard loading tarpaulin carried in each plane be thrown over the open plane door and the end of the refrigerated truck while loading to prevent undue loss of cool air.

Within each airfreighter are two thick Fiberglas curtains which are movable and may be used to compartment the cabin. These, together with valves on the inlet air ducts, can be utilized to regulate, within limits, the temperatures of as many as three compartments.

The flight crew, comprised of two airline rated pilots and a rated mechanic on Slick planes, may enter the cockpit through a door in the nose of the ship, thus leaving the cargo sealed throughout flights. When carrying precooled perishables, Slick airfreighters have 100 pounds of dry ice in the cooler equipment. Gloves with which to handle the ice are provided the flight mechanic who can reload in flight at specified periods depending on temperatures, and 10 minutes before landing to offset ground temperatures.

Temperatures at two points in the cabin may be read by the flight crew on a temperature-control panel in the cockpit, eliminating the necessity of entering the closed cargo cabin.

Eastern, Aerovias Braniff Enter Interline Agreement

Eastern Air Lines has completed arrangements with Aerovias Braniff, Mexican division of Braniff Airways, whereby it will pay its approved Mexican agents commission on any interline EAL transportation sold. In turn, Aerovias Braniff will pay commissions on sales over its lines to EAL-approved agents on such international traffic originating over EAL routes.

SOMETHING NEW IS ADDED



That's the new Braniff insigne to which the smiling young lady is pointing, adopted as a result of the airline's change of trade name to Braniff International Airways. The sixth in a series of insignia which has mirrored the airline's growth, it was designed following the recent Civil Aeronautics Board decision granting 7,719 miles of international routes to Braniff in Mexico, Cuba, Panama, and South America.

Trans Caribbean to Pay 5% Brokerage on All Shipments

William McTaggart, general manager of Trans Caribbean World Airways, revealed at press time that the airline has established policy to pay five percent brokerage to forwarders on all domestic and foreign shipments. This is the first such move by any airline in this country.

Trans Caribbean, one of the larger non-scheduled airlines in the United States, will haul any type of shipment permissible to be flown in aircraft without injury to the crew or equipment, regardless of whether its destination is a domestic or foreign point. The airline is currently operating in this country as well as to Cuba and Puerto Rico. Interested forwarding firms may apply to Trans Caribbean's main office, 36 West 44 Street, New York for complete particulars.

Twin-Engine Helicopter To be Made by Kellett

Air transport operators interested in short-hauls will be offered the world's first commercial twin-engine helicopter by the Kellett Aircraft Corporation. The machine will be capable of carrying 10 passengers, in addition to a pilot and copilot, or will handle cargo loads of a ton or more.

According to W. Wallace Kellett, president, it will be the policy of the corporation "to concentrate for several years in the development of multi-engine transport-type helicopters to the end that this phase of the expanding helicopter industry will receive technical attention comparable with that expected in the smaller, personal plane field."



AIR-CONDITIONING BY SLICK—Looking forward and to left in belly compartment of one of Slick's Commando cargoplanes. Cooling plant is shown at upper left. Ducts lead to and from cargo cabin.

AIR CARGO PERSONALITIES

M. P. BICKLEY

Manager of Cargo Sales
United Air Lines

PARADOXICAL as it may seem, M. P. Bickley, manager of cargo sales for United Air Lines, first entered aviation because of his experience in railroading!

Back in 1929, a group of Tulsa oilmen headed by Erle P. Halliburton formed a new airline known as Southwest Air Fast Express to operate between St. Louis, Kansas City, through Oklahoma to Texas. Primarily it was designed to expand the usefulness of air speed to the oil industry through scheduled flying.

Bickley, then traffic representative for the New York Central system in Tulsa, was called in to help set up a traffic department for the new venture. The young man, with the railroad since leaving Ohio State University in 1927, considered the opportunity a distinct challenge. He was assigned as St. Louis district traffic manager for Southwest Air Fast Express and immediately began thinking up new ideas for the movement of passengers and cargo by air.

One of the features of that early airline operation, he recalls, was a traveling ticket office. This consisted of an aero car which picked up passengers arriving by train. The airline departure schedule was such that all ticketing, baggage weighing, and passenger manifesting had to be accomplished between the station and the airport—and it was all done en route.

"Quite often it was necessary for the passenger representative to assist the one-man ground crew in winding up the engines and otherwise assisting the two-man flight crew in readying the



plane for departure," Bickley related. "The aero car, incidentally, usually waited an hour or so at the airport to make sure that the plane actually was going through, inasmuch as there were no ground to plane radio communication facilities in those days."

Flying 14-passenger, tri-motored Ford equipment and without any of the present day flight and navigational aids, Southwest Air Fast Express, or Safeway as the line was known, operated a year-and-a-half without an accident.

When the company was absorbed in 1930 by another airline, Bickley joined Century Airline as assistant general traffic manager. This was the company operated by the E. L. Cord interests between St. Louis, Chicago, Detroit and Cleveland. When Century was absorbed by American Airlines in 1932, Bickley became district traffic manager for the latter company in St. Louis. Single-

engined Fokkers, Pilgrims and Vultees and tri-motored Condors and Fords, with speeds ranging from 90 to 120 miles an hour, comprised the flight equipment of that day. Even at those speeds, however, air passenger and air cargo business began to develop rapidly.

The value of air speed was quickly apparent to shippers in widely diversified fields. Foreshadowing the large-scale shipment of flowers on United Air Lines' coast-to-coast route today, Bickley recalls that H. G. Burning, a wholesale florist, was one of the first to see the possibility of shipping flowers by air and regularly supplied his branches in New Orleans and Texas by this method. Emergency shipments of all kinds were beginning to be sent via air express—and larger, faster planes were developing.

Bickley joined United Air Lines as traffic representative in Newark in 1935, later serving as district traffic manager in Philadelphia and New York.

During the war he served in the Air Transport Command as commanding officer of the regional air priority control office at LaGuardia Field. His most recent Air Transport Command post was as a lieutenant colonel under General MacArthur in Manila. Upon returning from military service, he was assigned to United's Chicago headquarters as manager of cargo sales, succeeding Paul E. Burbank who has become secretary and general manager of the National Stationers' Association in Washington, D. C.

Air Cargo Coordinators Organized in Chicago

The first transcontinental air freight coordinating service in the country—National Air Cargo Coordinators, Inc., of Chicago—has been incorporated in the State of Illinois. With bases in Chicago, New York, and Los Angeles, the company will coordinate air shipments of all sizes and consolidate them into planeload lots. Rates will be based on door-to-door service.

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Institute of Air Transportation Hits Out At Proposed Restrictions on Nonscheduled Lines

A BRIEF replying to the proposed restrictions on non-scheduled airlines announced recently by the Civil Aeronautics Board has been filed by the Institute of Air Transportation. Brigadier General Lawrence J. Carr, president of the organization which spoke for some 70 independent airlines, largely manned by war veterans, revealed that copies of the brief were submitted to President Harry S. Truman, members of the Senate and House, and other Government officials, as well as to the CAB.

The action of the IAT also represented the Air Cargo Association of California, New England Air Carriers, Mid-Western Air Carriers, Contract Carriers Association of Florida, and the East Coast Fixed-Base Air Carriers.

The "fixed base air carriers," as Carr termed them, have asked for the right to transport air mail at three cents and air parcel post.

"We are convinced that mail can be flown by fixed base air carriers for three cents a letter at a reasonable profit," he said. "We are also convinced that air parcel post can be flown now, and not years hence, as recently suggested, at considerably lower rates and also make a profit for our carriers."

According to the Institute, the CAB's restrictive measures would prohibit the solicitation of general business, advertising of flight information, and the informing of the public about services offered; limit the number of flights to 10 per month between any two points; restrict such limited operations to the North American continent; and prohibit all over-water international flights.

"We welcome regulation," Carr stated. "Our safety record has been second to none, and we are adhering to CAA safety standards. But we feel that such regulations should be fair and equitable. In this connection we suggest that on any passenger flights which are between points at present served by scheduled airlines, fixed base air carriers be allowed to operate a maximum of 20 round trips a month or 500 hours flyingtime per month, whichever is the greater."

He explained that the alternative was introduced in order to allow the short-haul operators the opportunity of flying more than 20 trips between points relatively close together. Carr declared that the fixed base air carriers were following the general lines of the recommendations laid down by the CAB examiners whose report was largely disregarded by the CAB itself in its proposed regulations.

The IAT head stressed the fact that the fixed base air carriers had established an industry with an investment of approximately \$350,000,000 in equipment. To this figure he added another \$100,000,000 representing the investment made by the Government in the wartime training of the 20,000 veterans now employed. Most of the aircraft operated, Carr said, was secured from Government surplus and financed by the Reconstruction Finance Corporation. He added that many of the new companies had floated stock in good faith to the public whose investments would be jeopardized by these regulations.

Gael Sullivan, Second Assistant Postmaster General, has called the Institute's air mail proposal "the most fantastic a supposedly responsible organization could

make," adding that the mail must go over regularly scheduled routes and that to turn it over to non-scheduled carriers would result in "chaos."

The CAB has stated that under Congressional mandate, it "has been and is prevented from authorizing operations in air transportation simulating, approximately or approaching the services of scheduled certificated air carriers unless and until public hearing demonstrates that such services are required by the public convenience and necessity."

Following is the full text of the recommendation relative to the proposed Amendment 3 of Section 292.1, as submitted by the Institute of Air Transportation:

Predicated upon the duty of the Civil Aeronautics Board to "encourage and foster the development of Civil Aeronautics in the United States and abroad, . . ." as set forth in the Civil Aeronautics Act and predicated upon the policy of the United States Government to oppose monopoly, the following resolutions and proposed regulations will be submitted to the Civil Aeronautics Board, all governmental agencies having jurisdiction, the Congress of the United States and to the President.

WHEREAS, there now exists a large body of efficient fixed-base air carriers engaged in the business of transporting persons and/or cargo under Regulation 400-1 as amended December 7, 1938 relating to non-scheduled operations and

WHEREAS, these fixed-base air carriers in the aggregate operate approximately 529 transport planes consisting of DC-3s, DC-4s, Curtiss Commandos and Lodestars sold to them by the United States Government at a cost of millions of dollars; and in addition 2,000 miscellaneous smaller type planes as well as 3,000 single engine planes and

WHEREAS, the said fixed-base air carriers employ a total manpower force of approximately 6,587 pilots, 10,000 ground crew men and 2,845 miscellaneous personnel and

WHEREAS, approximately 100 per cent of the said personnel and management of the fixed-based air carriers are veterans of the United States Army Air Forces and the United States Navy Bureau of Aeronautics, all having actively engaged in World War II and

WHEREAS, this force of men, if permitted to operate and retain their skills, constitute an important trained military reserve Air Force essential to the military security of the United States and

WHEREAS, this force of men, as a military unit, represent an investment by the United States Government of a sum in excess of one hundred million dollars training costs of personnel and

WHEREAS, the United States Government originally invested in excess of 375 million dollars in the planes and equipment operated by this force of men and the same constitutes a military reserve of such planes and equipment and

WHEREAS, these fixed-base air carriers having pioneered the fields of non-scheduled operations, contract operations and cargo operations on a large scale and by reason thereof are entitled to common law rights to so operate and

WHEREAS, the fixed-base air carriers constitute an entirely new industry and vehicle for the advancement of aviation operating between areas rather than between cities, and specializing in the experimentation and development of new fields rather than the encroachment on older avenues of business and

WHEREAS, the fixed-base air carriers reserve at all times the right to reject transportation of persons and/or property which do not conform to particular contractual policy and

WHEREAS, the 17 scheduled airlines are now attempting to monopolize the entire aviation field servicing the requirements not only of the 140 million people within the United States but all the billions of people outside of the United States, not only in the fields of scheduled operations but also in the field of non-scheduled operations and

WHEREAS, the certificates of convenience and necessity when originally issued to the scheduled air lines did not contemplate the transportation of air freight as such, and in that respect the scheduled airlines were not certificated as to air freight and

WHEREAS, the scheduled air lines are attempting to encroach upon the field of air freight pioneered by the fixed-base air carriers and

WHEREAS, the scheduled airlines are presently subsidized by the United States Government by means of air mail contracts despite the fact that they are financially secure as is witnessed by the public flotation of stock issues aggregating hundreds of millions of dollars within the past year and aggregating total stock valuations in terms of billions of dollars and

WHEREAS, the scheduled airlines are charging the United States Government for the transportation of such mail and parcel post at a rate which is both exorbitant and unfair to the taxpayers of the United States and

WHEREAS, the fixed-base air carriers are qualified and can profitably and efficiently transport the bulk of the mails at a rate which will permit a three-cent mail letter to become a reality immediately and

WHEREAS, the fixed-base air carriers are qualified and prepared to develop a low cost parcel post service immediately and not years hence at a cost to the government far below the prevailing rate (providing for nonstop service between major cities and local service between towns with adequate airport facilities and

WHEREAS, the fixed-base air carrier as a new and young industry are entitled to the support of the United States Government and the encouragement of the Civil Aeronautics Board as a capable and efficient instrument of air transportation and

WHEREAS, the United States Government can effect such encouragement and development of aviation by permitting the said fixed-base air carriers to transport the bulk of the mails and,

WHEREAS, the fixed-base air carriers are prepared to cooperate with existing railroads and steamship companies carrying loads to and from the various termini of such railroads and steamship lines on a contract basis and

WHEREAS, proceedings have heretofore been had under Docket 1501 before the Board of Examiners of the Civil Aeronautics Board under a so-called investigation of the non-scheduled air lines, before which board none of the transport fixed-base air carriers were heard or represented and

WHEREAS, despite the fact that such transport fixed-base air carriers were not heard or represented, they were the subject of analysis and consideration and

WHEREAS, the report and recommendations of the Examiners of the Civil Aeronautics Board in relation to such carriers was most favorable to the extent that the said examiners of the Civil Aeronautics Board issued highly laudatory findings and conclusions relating to this class of carrier, and recommended "as much freedom and latitude as possible for development of transportation service by fixed-base operators, and recommend "that no distinction shall be admitted on the basis of scheduled or non-scheduled service," and further recommended "the adoption of a liberal proposed classification and exemption order" and

WHEREAS, the Civil Aeronautics Board is about to consider a proposed regulation so stringent as to be contrary to the recommendations of the Examiners who conducted hearings and

WHEREAS, such stringent regulations, if permitted to go into effect, would stifle the advancement of aviation, would bar the encouragement of a new industry and would react to the detriment of deserving veterans of World War II; to the detriment of the military forces of the United States; to the detriment of business and to the detriment of all citizens and the general public.

Now, therefore, in view of the foregoing, the Institute of Air Transportation on behalf of the fixed-base air carriers requests:

1. That hearings be immediately commenced to determine the recommendation of fair and equitable legislation relating to the business and operations of fixed-base air carriers at which hearings members of the industry may be permitted to be heard and represented by counsel.

2. That pending the outcome of such hearings the recommendations of the Examiners of the Civil Aeronautics Board should be adopted en toto with exceptions as per the annexed proposed regulation.

3. That the proper Congressional committee or committees be asked to consider the advisability of investigating present air mail contracts with a view to cancelling the same and establishing a complete revision based upon fair and equitable rates and permitting the allocation of new contracts to fixed-base air carriers.

4. That pending the outcome of such Congressional investigation, the fixed-base air carriers shall be permitted to contract with the railroads and steamship companies for the transportation of mail, passengers and/or cargo to and from the various termini of such railroads and steamship companies wherever the termini of the railroads and steamship companies are within or meet the area of the fixed-base air carriers.

LEGAL NOTES

on Air Transportation

By GEORGE BOOCHEVER

Chairman of the Legal Committee and
General Counsel to the Aviation Sec-
tion, New York Board of Trade

THE Civil Aeronautics Board has, at long last, taken decisive action in connection with the operations of non-scheduled air carriers. On May 3rd, 1946, it adopted certification and operation rules for non-scheduled carriers designated as Part 42 of the Civil Air Regulations.* These rules are effective August 1, 1946, and start off with the provision that: "No person shall operate as an air carrier without an air carrier operating certificate issued by the Administrator, or in violation of the terms of any such certificate."

The most significant portion of the Regulations is 42.9, Definitions, which read as follows:

Air carrier means any citizen of the United States who undertakes, whether directly or indirectly, or by a lease, or by any other arrangement the carriage by aircraft of persons or property as a common carrier for compensation

* The June, 1946 issue of AIR TRANSPORTATION contains the full text of Part 42, Amendment 2 of Section 292.1, and the proposed Amendment 3.

or hire or the carriage of mail by aircraft, in commerce whether such commerce moves wholly by aircraft or partly by aircraft and partly by other forms of transportation, between any of the following places: a place in any State of the United States, or the District of Columbia, and a place in any other State of the United States, or the District of Columbia; places in the same State of the United States through the air space over any place outside thereof; places in the same Territory or possession (except the Philippine Islands) of the United States, or the District of Columbia; a place in any State of the United States, or the District of Columbia, and any place in a Territory or possession of the United States; a place in a Territory or possession of the United States, and a place in any other Territory or possession of the United States; a place in the United States and any place outside thereof.

42.45 Exemptions, provides that:

An air carrier engaged in nonscheduled air carrier operations on or before August 1, 1946, may continue to engage in such non-scheduled air carrier operations without an air carrier operating certificate until such time as the Administrator shall pass upon the application for such certificate if prior to August 1, 1946 he has filed with the Administrator an application for such certificate.

The air craft requirements and other operations rules are set forth in detail in Part 42. The explanatory statement accompanying these regulations emphasizes the point that: "The fact that the operation is not scheduled and is not confined to fixed terminals or specific routes, does not prevent the operation from falling within the classification of common carrier, nor is it necessary that rates be published."

On May 17, 1946, the Board handed down its decision in connection with Docket No. 1501, which was a proceeding instituted by the Board, dated July 26, 1944, authorizing the investigation into matters relating to and concerning non-scheduled air transportation. At the same time, and as illustrative of its interpreta-

tion of what constituted or should constitute non-scheduled air services, it rendered decisions in Docket No. 1896, the Page Airways, Inc. investigation, and Docket No. 1967, the Trans-Marine Airlines, Inc. investigation of activities.

In conjunction with, and as part of its decision on Docket No. 1501, the Board put into effect Amendment No. 2 of Section 292.1 of the Economic Regulations as of June 15th, 1946, which requires that every air carrier undertaking to engage solely in non-scheduled operations, shall within 30 days after the commencement of such operations (or if such air carrier is already engaging in such operations on the effective date of this Section, within 30 days after the effective date of this Section), file with the Secretary of the Board a statement, under oath, setting forth certain prescribed information.

The Board has also circulated to the industry proposed amendment No. 3 of Section 292.1 of the Economic Regulations, in connection with which it solicits the submission to it of comments as to the desirability or undesirability of its adoption in whole or in part. Comments in writing as to the proposed amendment No. 3 may be submitted in writing to the Board on or before July 22, 1946.

The classification of non-scheduled air carriers under proposed Amendment 3 of Section 292.1, sets up the following test as to what constitutes non-scheduled air carriers:

Within the meaning of this section, any operation shall be deemed to be non-scheduled if the air carrier does not hold out to the public expressly or by a course of conduct that it operates one or more aircraft between any designated points regularly or with a reasonable degree of regularity, upon which aircraft it accepts for transportation, for compensation or hire, such members of the public as apply therefor or such

(Concluded on Page 50)



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IT'S AN *Air* WORLD

(REG. U. S. PAT. OFF.)

By L. A. GOLDSMITH, *Economic Analyst*, AIR TRANSPORTATION

Colombia in the spotlight with the discussion ranging from a President-elect and coffee to the miracles of air travel and the air shipment of cattle

THE Republic of Colombia is a natural for air transportation, especially when you recall that this was the first country in the Americas to introduce commercial aviation over a quarter of a century ago. Through air transportation Colombia is today practically at our own threshold. Not only are her Atlantic coastal cities of Barranquilla and Cartagena within a day's air travel from the United States, but her inland capital city of Bogota, as well as Medellin the second most important city, also far inland, are only two or three hours farther.

President-elect Dr. Mariano Ospina Perez recently concluded a trip to the United States, during which time he visited New York and Washington, making a stay of several weeks. Without benefit of air travel such a visit would hardly have been possible, as the time consumed in travel to the United States and back to Colombia would have taken from six weeks to two months, instead of approximately two days' flying time!

Colombia is of extreme importance to this country and a closer understanding of conditions there is of value to us for many reasons. We not only buy many essential products from Colombia but sell her a great many, and we have numerous financial interests and investments in that country. Colombia's proximity to the Panama Canal and her vital cooperation with us during the war have a significance which should not be overlooked.

When the old-timers in South American travel and business affairs recall the week or 10-day sea trip to reach the coast of Colombia and the 10-or 12-day journey by steamer up the Magdalena River, with still another trip on muleback requiring two or three or more days to Bogota, they cannot get over the marvels of today's speed of air travel to this country. Even now, after so many years of commercial aviation in Colombia, every new phase of air transportation as applied to that country seems to stir his imagination vividly. For instance, at a dinner in honor of the President-elect which took place in New York on June 19 under

the sponsorship of the Pan American Society of the United States and the Colombian American Chamber of Commerce, A. W. Bittenheim, president of the latter organization, digressed from his speech relating to the background and activities of Ospina Perez, to comment on the recent air shipments of cattle to Colombia.

With the election on May 5 of the Conservative Presidential candidate, a change in party government took place—the first in 16 years! Another aspect of Ospina Perez' election is the fact that his family has already given two Presidents to the country, he being the third Ospina to be so honored. The first was his grandfather, Mariano Ospina; his uncle, Pedro Nel Ospina, was also a Presidential incumbent. With a third member following in these footsteps, the Ospina name becomes almost a Presidential dynasty in Colombia.

The President-elect is no novice in political life. He has been elected three times to the lower house of the Colombian Congress. Later he became a Senator, and also held office as Minister of Public Works. In private life he has been well known as a mining engineer, banker, financier, and an active factor in coffee interests. The latter product is extremely important and basic to Colombia. Coffee is the country's lifeblood for its external economy. Colombia is the second largest coffee producer in Latin America; Brazil, of course, is the first. Twenty-one percent of all coffee exported by the South American countries comes from Colombia, while 80 percent of her coffee production is purchased by the United States under quotas set up by the Inter-American Coffee Board.

The question of coffee prices has been adjusted by the United States which authorized a slight increase in import prices. In a great measure, this increase, which should mean only an infinitesimal fraction of a rise in the price of household coffee, will mean higher wages for the laborers on the coffee plantations. All through the war years the United States Government rigidly enforced the price paid to the

exporters of coffee. As production costs rose, it was the laborers who suffered most. As the largest consumers of coffee in the world, unless we authorized an increase in the prices we would allow our importers to pay, the coffee producers could do nothing to alleviate the distress of their own working population.

★ ★ ★ ★ ★

AND now it is bulls, cows and calves which are flying through the air with the greatest of ease—aided and abetted by the airplane, of course.

Cattle for breeding purposes have recently been shipped out to Colombia by air. The first load, consisting of six bulls and four heifers valued at \$20,000, left La Guardia Field on May 20. Consigned to Francisco Roldan, a dairy farmer of Medellin, the cattle were transported by International Air Freight. The airplane was specially fitted with stalls and racks so that the animals would not shift during the trip. The flight had one stopover at West Palm Beach to feed and water the stock.

Barely three weeks later another cattle shipment for breeding purposes was sent by air to Colombia, this time to the capital city of Bogota. Twelve-pure-bred Guernsey calves were shipped via the Commander Line (formerly Willis Air Service, Inc.), and took off from Bendix Airport at Teterboro, New Jersey. They left early on a Monday morning and were scheduled to arrive the next morning in Bogota. The actual flying time was 18 hours, with stopovers at Miami and Kingston.

The Guernseys were bought by a Colombian rancher for breeding purposes. Each calf was about one year

(Concluded on Page 50)



BOUND FOR COLOMBIA—Ten Guernseys inside a Commander Line DC-3 which took off from Teterboro Airport, New Jersey, and landed in Bogota, Colombia, a day later.



(REG. U. S. PAT. OFF.)

AIR EXPRESS REA

Air Express shipments handled at New York City during May, topped all previous records for the year, with a total of 95,059 shipments, compared with 59,252 handled the same month in 1945, a gain of 60.4 percent. The number of Air Express shipments handled each month since January, has climbed steadily with gains from 12 percent the first month, 21 percent in February, 30 percent in March, 56 percent in April and the latest, a 60 percent gain for May. Gross revenue climbed slowly, however. The first two months of 1946 showed a loss of 5.6 percent and 14 percent and March just breaking on the plus side of even. April showed the first gross revenue increase of the year with 22 percent while May netted \$393,909 against \$351,945 grossed in May, 1945, with a gain of 11.9 percent.

AMERICAN OVERSEAS

A three-for-one split of its 1,000,000 shares of capital stock was proposed at a meeting of the board of directors of American Overseas Airlines, Inc. The resolution adopted provides that the 1,000,000 shares of the par value of \$3 will be split so that each shareholder will become the owner of three shares of capital stock of the par value of \$1 per share.

BEECH

Completion of a \$4,000,000 loan agreement between a syndicate of 15 banks and the Beech Aircraft Corporation of Wichita was announced recently by Arthur W. Kincade, president of the Fourth National Bank in Wichita, whose bank headed the group. Kincade said the credit had been set up for the purpose of financing production of the types of Beechcraft airplanes currently in production, and new models which the company will announce in the near future. During the war a similar syndicate of banks, headed by the Fourth National in Wichita, made available to Beech a credit of \$50,000,000 under the V loan regulations. Prior to that a syndicate, also headed by the Fourth National, had established a credit of \$2,000,000 for the company. All of these loans have been repaid.

COLONIAL

For the second successive month, Colonial Airlines passenger travel reached an all-time high in May, doubling the traffic of May, 1945. Mail and Express carried in May also reached new all-time peaks.

An increase of 107.5 percent in passenger travel was recorded in May compared with May, 1945, when 12,917 passengers flew the Colonial routes. A total of 3,844,063 passenger-miles were flown for May, an increase of 563,192 over the preceding month and 1,932,207 miles better than May, 1945. An increase of 116 percent over May, 1945, in express carried was recorded when 10,204,090 pound-miles were carried. Mail flown totaled 19,054,437 pound-miles, an increase of 90.6 percent over May, 1945.

CONSOLIDATED VULTEE

Consolidated Vultee Aircraft Corporation reports for the fiscal year ended November 30, 1945, revised net income of \$6,748,932, equivalent to \$4.72 a share after provision for preferred dividend requirements, according to the Corporation's annual report to stockholders. Sales for the 1945 fiscal year, including contract termination claims, amounted to \$644,053,838. The ratio of earnings to sales was 1.05 percent.

As of November 30, 1945, the Corporation's backlog of unfilled orders was \$229,610,000. Additional orders received to April 30, 1946, have increased this figure to \$264,910,000, exclusive of products not related to aviation. Of this amount, \$173,345,000 represents contracts for military production, \$62,770,000 for Army and Navy experimental and research projects, and \$28,795,000 for commercial and personal aircraft.

FAIRCHILD

Webb Wilson, treasurer of Fairchild Engine and Airplane Corporation, has announced that the corporation has notified its banks that it has elected to reduce its Regulation V credit from \$10,000,000 to \$5,000,000, effective July 8. Two previous reductions made in 1945 had reduced the V-loan credit to \$10,000,000 from the original amount of \$25,000,000 arranged in November, 1944.

"The corporation has not borrowed any money under this credit since the latter part of September, 1945," explained Mr. Wilson, "and, although unfilled orders at May 31 were in excess of \$68,000,000, the corporation does not presently anticipate borrowing in the near future. Therefore only a small portion of the original credit is being retained as protection against presently unforeseen needs." The V-loan credit matures November, 15, 1947.

Mr. Wilson also announced that of the 16,864 shares of Fairchild Engine and Airplane Corporation \$2.50 cumulative preferred stock outstanding at the time the preferred was called, all but two shares were converted into common stock on or before June 24, 1946, the redemption date. Each share of preferred was convertible into 14 shares of common stock up to the close of business on June 24, when the conversion right expired. The two shares not converted will be redeemed in cash at \$53.70 per share. Common stock outstanding at the close of business June 24 was 2,302,707 shares. The entire issue of \$2.50 cumulative preferred stock was called May 24 for redemption June 24 at \$52.50 plus accrued dividends of \$1.20 per share. The original issue consisted of 90,000 shares which were publicly offered at \$50 per share and accrued dividends in May, 1945, by Smith, Barney and Company and associated underwriters.

LOCKHEED

Final accounting of the war effort of the Lockheed Aircraft Corporation was made to stockholders by Robert E. Gross, presi-

dent, in a report that showed a substantial increase in surplus for 1945 despite a decline in sales.

The report revealed that \$5,469,888 had been transferred to surplus for the year ending December 31, 1945, an increase of \$947,040 over the amount transferred to surplus at the end of 1944. Sales for 1945 were \$417,615,160 as compared with sales of \$611,537,771 by the corporation in 1944.

The April interim report showed a backlog of commercial orders totaling \$55,430,000 for Constellation transports still to be delivered. Since then TWA has ordered an additional \$10,000,000 worth of Constellations. The military backlog totaled \$144,309,000 covering orders for the P-80 Shooting Star, Army Air Forces jet fighter, the P2V Neptune Navy patrol bomber, and the large Constitution transport for the Naval Air Transport Service.

MID-CONTINENT

Reflecting an 80 percent increase over figures for the same period of last year, Mid-Continent Airlines' operating revenue for May, 1946, was \$439,582. The figures showed a 92 percent increase in revenue miles flown, indicating an increase of 219,507 revenue miles over the May, 1945, figure of 239,274 or 458,781 revenue miles for May, 1946. As compared to \$24,783 for May of last year, the line's net profit before taxes was pegged at \$69,452. This figure minus income taxes amounts to \$38,453 as compared to \$14,429 for May of 1945, which represented the net profit after income taxes had been deducted.

NORTHEAST

Northeast Airlines' passenger totals for the month of May exceeded those of May, 1945, by 151 percent. The unofficial May total of 33,821 passengers carried marks a new high in Northeast's 12-year history and better April's figure by 29 percent.

NORTHWEST

Two new all-time records were set by Northwest Airlines in carrying passengers and express during May. During the month, 53,909 revenue passengers were flown 32,045,278 revenue passenger-miles. This exceeded the previous all-time record, set in April of this year, by 4,429 revenue passengers and 4,133,146 revenue passenger-miles, the April total being 49,480 revenue passengers and 27,912,132 revenue passenger miles. The May figures this year ran more than twice those of a year ago, when 23,685 revenue passengers were carried 15,675,272 revenue passenger miles in May, 1945.

All-time express records also were broken during this May, when 350,919 pounds of express were carried 214,990,847 pound-miles. This compares with 262,387 pounds of express and 161,056,217 pound miles in April of this year; and 243,465 pounds and 165,588,075 pound miles in May, 1945.

A dividend of 50 cents per share on the common stock of the airline was declared by directors of the corporation. The dividend, payable July 1 to common shareholders of record as of June 20, represents a total of \$271,935. At the present time the company has a total of 543,870 shares of common stock outstanding. It was the fifth consecutive year that NWA directors declared a dividend.

PAN AMERICAN

Pan American Airways Corporation has recorded gross revenues of \$69,000,000 and

net earnings of \$7,565,580 for the year 1945.

Consolidated net income for 1945 includes a non-recurring profit of \$4,421,418 from the purchase by the Chinese Government of the 45 percent interest held by PAA in China National Aviation Corporation upon expiration of that corporation's franchise. To continue the mutually profitable partnership arrangement with the Chinese Government, PAA accepted a 20 percent interest for \$1,555,000 in a new corporation, also named China National Aviation Corporation, to operate both domestic and international services.

Included estimated payment for the transportation of United States mail, operating revenues for 1945 were reduced by a \$1,279,560 reserve out of earnings, pending final settlement of the current Latin American mail rate proceeding.

An offering, nearly 95 percent of which was taken up by stockholders, provided \$43,000,000 in new equity capital, with 2,000,000 stock purchase warrants still outstanding, which, when exercised, would provide an additional \$36,000,000 of new equity capital. At the present time there are 32,000 PAA stockholders, double the number a year ago.

PANAGRA

Pan American-Grace Airways has revealed a 25 percent increase in the number of passengers carried during the first quarter of 1946 over the same period in 1945. In this three-month period, Panagra flew 22,827,957 passenger-miles and carried 27,747 passengers, 731,458 pounds of express and freight and 99,251 pounds of mail along the west coast of South America. In comparison with the first quarter of 1945, these figures show an increase of 4,298,531 passenger miles, 5,582 passengers, 237,536 pounds of express and freight and 18,324 pounds of mail. This record performance during the first three months of 1946, also surpassed Panagra's totals for the last quarter of 1945 which had been the airline's best.

Baltimore Boosted By Captain Rickenbacker

Baltimore was described as a "natural gateway" for intercontinental air traffic between Canada, the United States, and Latin America, by Captain Eddie Rickenbacker, president and general manager of Eastern Air Lines, who predicted that the city's role in airline operations would become increasingly greater.

Rickenbacker, in his argument before the Civil Aeronautics Board to extend service from Havana to Balboa, Canal Zone, pointed out that the Cuban capital is only five hours from Baltimore, and Balboa eight hours. He noted that Baltimore is already certified as a transatlantic co-terminal, but that it is without direct communication with Latin America. The airline official declared that a Baltimore passenger had to board three planes to reach the two cities.

"It is bad enough for passengers to have to use three airlines," he said, "but with freight it's even worse. After all, the passenger can walk from plane to plane, but freight has to be carried. What we want to do is to extend our service so that freight can be loaded in planes taking off from Baltimore, stop at Miami or Havana if necessary, and then continue to the

SLICK

Slick Airways, Inc., nationwide contract air carrier, announces that in the first three months of operation concluding June 3, its fleet of C-46Es has flown more than 1,000,000 revenue ton-miles of freight. Starting March 4 with a load of meats to Chicago from the organization's home base in San Antonio, the company used four of its airfreighters to fly 57,843 ton-miles in March, six to amass 239,626 in April, and eight to bring the total to 662,629 in May. The first three days of June added 83,401 for a grand total of 1,043,499 revenue ton-miles.

TRANS WORLD

TWA chalked up a 10 percent boost in domestic passenger service during the first 1946 quarter over the previous three-month period, with increased equipment a contributing factor in the gain. Nine DC-3 aircraft and eight Constellations were added to TWA's domestic fleet during the first quarter. Despite a 39.5 percent drop in mail ton-miles and a slight decline in express ton mileage, total domestic revenue ton-miles for the three months rose four percent over the previous quarter.

WESTERN

During May Western Air Lines showed an increase of 71.02 percent in revenue passenger miles flown over May, 1945. WAL flew 16,549,967 revenue passenger-miles during May compared with a May, 1945, figure of 9,677,328 miles. The May figure is also a 12.08 percent increase over revenue passenger-miles flown during the preceding month of April, 1946.

Express pounds carried during May reached a 21.81 percent increase over poundage carried during the corresponding month of 1945. The May, 1946, figure is 162,127 while the 1945 figure is 133,102. Express pound-miles flown show a decrease of 14.07 percent, dropping from 65,686,813 for May, 1945, to 56,442,982 for May, 1946.

Canal Zone. With the freight locked in compartments, there is no delay in clearing customs; but with passengers and freight being transferred from one plane to another, there must be customs inspections."

Rickenbacker stated his belief that "air freight will revolutionize the way of doing business." He said that merchants will not find it necessary "to invest capital in large warehouses when they can obtain goods from factories in less than 24 hours."

BOAC Inaugurates Flights From London to New York

British Overseas Airways Corporation has inaugurated regular commercial service between London and New York, terming the run the "Speedbird Route." Using Constellation equipment, intermediate stops are made at Rineanna, Eire, and Gander, Newfoundland. The opening week found BOAC making two flights. These will be increased to four a week by the latter part of this month.

It is reported that BOAC is now carrying air freight without priority between the United Kingdom and India. Those interested should apply at 420 Madison Avenue, New York.

Surveying Export Field For American Aircraft

(Continued from page 11)

lated by some two million white people, has granted subsidies to all its towns for maintaining air strips. Today South Africa probably has more landing strips in proportion to population than any other country in the world. Having enjoyed a well-rounded prosperity during the war years, South Africa has adequate financial balances.

Although part of the Empire of Great Britain, the Union is controlled economically by Holland-Dutch descendants who still remember the Boer War; some would rather purchase airplanes from the United States than from Britain. Railroads and highways are still underdeveloped, and there is a fertile field for growing air traffic between the cities. While the main market lies around Capetown, Johannesburg and Pretoria, there are innumerable scenic spots in South Africa which are inaccessible to tourists by any other means than air transport.

The Middle East area also offers us customers. Its people learned much about us during the war from the Air Transport Command and our Army Air Forces bases. Many GI's and American officers have liked this section of the world enough to stay there and develop businesses.

Great numbers of small commercial planes and larger airline equipment are needed for transportation between cities that are from 200 to 400 miles apart, and have no interconnecting railroads or highways. Flying boats and amphibians will also be in demand to take care of inter-island traffic.

It is clear, as we count such prospects for selling our aircraft abroad, that the opportunities are not unlimited in scope. But they are worth going after. Diligence in cultivating every possible sale will not only bring our aircraft industry needed business, but will also create and maintain prestige for the American nation among the other peoples of the world.

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A new direct service from Toronto to Chicago has been inaugurated by Trans-Canada Air Lines.

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AIR TRANSPORTATION *Congratulates*

★ EXECUTIVE ★

MAJOR GENERAL BENJAMIN FRANKLIN GILES, former Commanding General of the Africa-Middle East theater, elected a vice president of TWA. He will direct the airlines activities in Africa and the Middle East. A native of Texas, he began his military career in 1917. He served as a pilot with the AEF in France during World War I and has been on active duty with various branches of the Army Air Corps since that time. For his services during the past war, General Giles was awarded the Distinguished Service Medal with Oak Leaf Cluster, the Silver Star, and the Air Medal.

M. R. SCHERMERHORN, JR., and **G. T. WILLEY**, respectively controller and vice president-manufacturing of the Glenn L. Martin Company, elected to directorships on the board. Schermerhorn fills a vacancy and Willey replaces Harry F. Vollmer who has resigned as a vice president and director.

T. RIEBER, president of the Barber Asphalt Corporation, voted a director of TACA Airways. He fills a vacancy caused by the resignation of Charles E. Mathews who was also a vice president.

CHARLES S. (CASEY) JONES and **PAUL J. NUGENT**, named directors of Atlantic Central Airlines. Jones, president of the Casey Jones School of Aeronautics, heads the Academy of Aeronautics and J. V. W. and Company. He is also a vice president of the Institute of Aeronautical Sciences and the National Aeronautics Association, and a director of the Boots Aircraft Nut Corporation and the National Aviation Company. Nugent, a partner in the stock exchange firm of Pollak and Igoc, is also a director of the Pollak Manufacturing Company.

HANS S. MUELLER and **ROBERT DEMAREST**, of Norseman Air Transport, Inc., appointed to the respective posts of vice president in charge of operations and assistant to the latter. Mueller, who holds a B.S. degree in mechanical engineering from the Case School of Applied Science and a similar degree in meteorology from New York University, served as an operations and flight control officer in the ATC during the war. Prior to the war he was a draftsman and engineer for a number of large corporations. Demarest is one of the founders of the airline. During the war he served as an ATC pilot in the China-Burma-India theatre, inaugurating the first scheduled run of the Ceylon-Australia section.

WILLIAM H. SCHWINGER, **HAROLD G. ROGERS**, and **F. LESLIE MARSDEN**, appointed to new posts in the Irving Air Chute Company. Schwinger has been promoted to vice president and treasurer and general manager of operations in the United States and Canada; Rogers elevated to vice president in charge of sales; and Marsden named a director of the company.

WILLIAM McTAGGART, traffic manager of Trans Caribbean World Airways, promoted to general manager of the

airline. A well-known figure in aviation circles, McTaggart taught air transportation at Temple University in Philadelphia of which city he is a native. Prior to joining Trans Caribbean last January, he served as traffic manager for TACA in New York. He is a member of the New York State Aviation Council and a committee chairman of the Aviation Section, New York Board of Trade.

G. G. BROODER, formerly assistant to the vice president-traffic, advanced to the position of assistant to the president of Western Air Lines. He is a former vice president and director of Inland Air Lines.

W. H. NEFF, named special assistant to the president of United Air Lines. A former aviation editor, he first joined UAL's public relations department in 1935, leaving four years later to become Pan American's public relations representative and eventually assistant director of public relations. He served in the Navy as a lieutenant commander.

C. C. PEARSON, appointed Eastern representative and assistant to the president of the Douglas Aircraft Company. He has been with the company for 16 years.

EDWARD S. BREWER, former Navy commander and wartime senior member of the Naval Aviation Cadet Selection Board at Boston, named assistant to the president of Wiggins Airways. He has been associated with commercial aviation for 18 years.

JAMES FINNIN, formerly a lieutenant colonel in the United States Army, back again with the Railway Express Agency, now serving as assistant to P. H. Cummings, air express executive. Before the war he was air express agent at LaGuardia Airport.

D. G. RICHARDSON, appointed assistant to the executive vice president of Chicago and Southern Air Lines. He will be in charge of the establishment of service on the Caribbean routes recently awarded to the airline. Richardson is a veteran of Latin American and Caribbean aviation, having served in that area in 1919 as chief flight instructor for the Cuban Army Air Forces. He has held important posts with the Aeronautics Branch of the Department of Commerce, Pan American Airways, and American Export Airlines.

JOHN KEEBLER and **PARK WRIGHT III**, named by National Airlines to the respective jobs of executive assistant to the vice president of traffic at Miami as well as superintendent of city offices, and executive assistant to the assistant vice president in charge of the New York area.

★ ADVERTISING ★ PUBLIC RELATIONS

THEODORE C. PELIKAN, a veteran of more than 10 years' service with Pan American World Airways' traffic department, appointed assistant to the advertising manager of the Latin American Division in Miami.



Theodore Casey



Arthur C. Smith



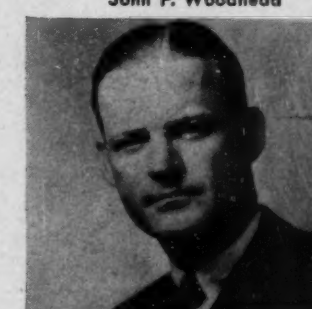
Jay R. Haymond



Shylte McMillon



John F. Woodhead



J. F. Symington, Jr.

STEVE CANTON, who formerly handled rail publicity for the Railway Express Agency, now serving as air express publicity representative for the company. He served in the Army where he was assigned to public relations.

ROSS C. ROACH, recently discharged from the Army Air Forces, who has joined the News Bureau of Mid-Continent Airlines. He was formerly associated with *The Shreveport Times*, Shreveport, Louisiana.

★ TRAFFIC ★

JOHN E. MULFIELD, named traffic manager of Pan American World Airways' Latin American Division. A native of Baltimore and a graduate of Yale, he served for eight years as traffic manager of Panagra and for two years as special assistant to the vice president and general traffic manager of PAA in New York.

NELSON B. FRY, appointed assistant director of traffic for TACA. He was formerly employed by United Air Lines, and last year served as president of the Air Traffic Conference of America and as chairman of the Tariff and Rates Committee for that group.

THEODORE CASEY, an expert on international air travel, appointed Southern Division agency manager of Eastern Airlines. A former agency supervisor for Pan American in Miami, he spent four years with the Office of War Information as a technical adviser on Far Eastern matters. He was a sales representative in Japan for five years with the Standard Oil Company, and has been associated with several steamship lines as tour conductor and lecturer from 1927 to 1939, traveling around the world five times.

GILBERT N. DAUNIC, now serving as traffic manager for TWA in Madrid. A native of Spain, he recently was released after service with the United States Marine Corps.

W. B. MOORE, named special repre-

sentative of Panagra in Miami. He has been with the airline since 1941, serving as traffic representative in Lima, Peru, and as assistant sales manager in Santiago, Chile. He saw service with the NATS.

ANTHONY J. SCHOEPP, appointed assistant district traffic manager and sales manager in Los Angeles for United Air Lines. He has been with the company since 1940.

★ CARGO ★

ARTHUR C. SMITH, who has been made cargo traffic manager for Western Air Lines. Formerly assistant cargo traffic manager, he will be in charge of all air mail, express, and freight. Before joining WAL in 1945, Smith was with American Airlines in Los Angeles and Continental Airlines in Denver. He also served with the Union Pacific Railroad for 11 years.

JAY R. HAYMOND, named superintendent of perishable traffic for the air cargo division of United Air Lines; and **SHYLTLE McMILLION**, new supervisor of cargo tariffs. Haymond was UAL's chief of cargo sales at Newark for 3½ years; McMillion was in charge of the airline's New York ticket counter for five years.

★ SALES ★

GEORGE L. HAYES, district manager of Air Cargo Transport Corporation's Los Angeles office, elevated to the post of general sales manager. An early flier, he has been associated with the aviation industry for many years. He was one of the founders of Western Air Express, and was also president of Seaboard Air Cargo, Inc.

DONALD W. HART, formerly city manager for Eastern Air Lines in Indianapolis, promoted to district manager for the Northwest Division. He joined the airline six years ago.

GEORGE P. BROWN, appointed regional sales manager in Boston for Northeast Airlines. He has been with NEA since

1943 after seven years with another commercial airline.

WILLIAM H. KLENKE, JR., named manager of the New York office of Consolidated Vultee Aircraft. He has returned to the corporation after serving 4½ years with the Marines, attaining the rank of lieutenant colonel.

★ OPERATIONS ★

JOHN F. WOODHEAD, system chief pilot and formerly general manager of the Northern Region of Northwest Airlines, appointed operations manager. He joined NWA in 1932 when he was only 17 years old. In his new position he will be responsible to the vice president-operations and assist him in the formation, establishment, and administration of departmental policies and procedure.

J. FIFE SYMINGTON, JR., who has taken over the job of regional manager of Pan American for the Middle Atlantic States, with headquarters in Baltimore. Formerly executive assistant to Vice President Harold M. Bixby, he joined PAA in 1934. He has had extensive airline experience in Latin America and Europe.

JOHN F. DAVIDSON, manager of transatlantic operations for American Airlines, named operations manager for Santa Fe Skyway. He is a native of Oklahoma and graduated from the University of Georgia with a B.S. in engineering and from Georgia Tech with an M.S. in engineering.

R. E. PROBST, **BRUCE SIMPSON**, **W. J. BOWDEN**, and **D. T. METZGER**, appointed to the post of district general manager in the following cities: Probst, Williamsport; Simpson, Elmira-Corning; Bowden, Erie; Metzger, Elizabeth City.

O. T. WILLIAMS, 17-year veteran with United, named manager of operations for the airline's new Los Angeles-Santa Catalina Island service.

Legal Notes

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express or other property as the public officers: Provided, however, that an operation between two points shall not be deemed to be non-scheduled if the air carrier in fact operates more than ten round trips per month between such points for a period of two consecutive months, except in cases where the air carrier can demonstrate that such flights between such points for such period were conducted as a result of unusual, emergency, or non recurring conditions, and that such flights did not result in the establishment of an operation conducted regularly or with a reasonable degree of regularity. Within the meaning of this section a "point" shall mean any airport or place where aircraft may be landed or taken-off, or an area within a 15 mile radius of such airport, or place where aircraft may be landed or taken-off.

The classification of non-scheduled air carrier, if applied literally would make it impossible for most of the non-scheduled carriers to operate. The proposed regulation fails to take into consideration the growth and potentialities of air transportation, of passengers, and even more, of cargo, and makes no allowance for flexible seasonal operations, both in passenger and cargo service.

The non-scheduled air carriers have furnished a service of the utmost value at times when the scheduled air services were unable to cope with the demand, and the field is potentially so great that it would

seem to be the height of imprudence to impose regulations which will curtail the activities of men who have for the most part been active in the air service during the war and who blazed the trail in civilian aviation through their activities as non-scheduled air carriers. The demand for air transportation is potentially so great that there is no excuse for giving the scheduled air carriers a monopoly in this field and dealing a death blow to the development of a type of service which does not actually compete with but supplements the service of the scheduled airlines.

In that connection, it is in order to point out that the non-scheduled air service has developed without mail subsidies, and that no such subsidies are asked for or expected. Moreover, the non-scheduled airlines have been enabled to exist by virtue of the fact that they have absorbed surplus planes from the War Assets Administration and converted them to civilian use.

In the recent railroad strike emergency, the non-scheduled airlines were called upon by the Government to stand ready to meet the emergency which they promptly did. Similar emergencies may arise again. Both from the standpoint of our civilian needs and possible defense requirements, the non-scheduled air services should be given a recognized status permitting them to carry on.

It's an Air World

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old and weighed approximately 450 pounds. The airline is contemplating the shipment of possibly 500 head of cattle to other South American localities in the next few months. Transportation by air is expected to prove no hardship to the cattle. Agricultural experts state that cows are so constituted that they will hardly realize that they are off the ground. As a general rule when cattle are transported by sea, they require from six months to a year to adjust themselves. The reason for this is that it is particularly hazardous for the animals to undergo the changes of climate in passing the tropics on a sea voyage. Now the agricultural experts are watching the effects of air transportation with great interest.

The day's flight to Colombia cuts the normal sea time by approximately 50 days—a tremendous saving in time, and money, to say nothing of the health of the animals and the elimination of the long adjustment period after the trip.